ENGINEATION

SOFTWARE DEVELOPMENT | WORKFLOW AUTOMATION | MOBILE APPLICATIONS | SYSTEMS INTEGRATION

North Carolina Chiropractic Association

Custom Social Media Management Solution

22 May 2020

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1. Project Background

Founded in 1917, the North Carolina Chiropractic Association's mission is to promote, protect, educate and advocate for chiropractic in North Carolina.*

The NCCA would like to offer a service that would facilitate the online presence of its members. The goal of the project is to deliver a custom social media management solution that allows NCCA staff to streamline social posts by its members to Facebook. Future development into other social media platforms (e.g. Instagram, Twitter, SnapChat, etc.), may occur so any solution would allow for a later development to support expansion in these areas.

Three (3) estimates have been requested, each with varying levels of complexity.

*https://www.emedevents.com/organizer-profile/north-carolina-chiropractic-association-ncca

2. General Information

2.1. Company Details

a. Company name and contact information

Engineation, LLC
110 SE 6th Street
17th Floor
Fort Lauderdale, FL 33301

116 W 23rd Street
5th Floor
New York, NY 10011

212-699-0790

NAME	TITLE	PHONE	EMAIL
Greg Van Dell	Founder / CEO	347-742-8383	gvandell@engineation.com

b. Company location

Engineation is headquartered in Fort Lauderdale, FL, and has a satellite office in Silicon Alley, New York, NY. We have resources in 4 continents: North America, South America, Europe & Asia.

c. Company background

En-gine-a-tion ***noun*** **\'en-jə-ˈnā-shən**

1. **Architects and engineers that strategically configure computer software and databases to fuel economic growth, automation, and efficiency.**

Engineation creates rock-solid software solutions that empower growth. Our highly skilled team builds modular, scalable infrastructures that fluidly integrate with other IT ecosystems.

We work in a cohesive environment and incorporate feedback at every interval. Our successful track record spans a broad swath of development projects across multiple industries and geographies. Our experiences with relational, NoSQL, and hybrid database solutions range from small migrations to enterprise-level systems integration.

Formed by 1 of 7 business partners at a successful video software company, Lead Architect, Greg Van Dell, created Engineation to help other companies succeed. There are many great technology ideas out there, but Engineation makes them work!

d. Details

Engineation is continuing to expand and presently has a global network of 44 experts. The most recent accomplishments include overseeing an older healthcare system migration now in use in multiple hospitals, upgrading a C# based financial software vendor loan system, and migrating a Foxpro member services system for a client in the insurance industry inventory to ASP.NET. Engineation is committed to bringing the strongest team to every deliverable.

2.2. Fluency with Requested Technology

Engineation has multiple resources that have been working with ASP.NET since its inception almost 20 years ago. For this project, Engineation brings the same strong team as is done with all projects. We also have expertise in the latest ASP.NET frameworks and ASP.NET Core frameworks, along with having backgrounds in object-oriented programming (OOP) and object-oriented design (OOD). Our own Database Administrators (DBA's) are consulted throughout any project where custom designed databases are used.

3. Rationale

3.1. Assumptions

The rest of this document, architectural proposal and the attached project plan are based on the following key assumptions:

A01	Development team will have full access to key team members (Heather, Alexandra, etc.).
A02	Project Owner will be available on a regular basis to our team

3.2. Technology Stack

- Application Framework: Microsoft ASP.NET Core 3.1 (C#)
- Data Layer Application Framework: ASP.NET Data Access Layer
- UI (User Interface) Application Frameworks: Bootstrap, ASP.NET Core MVC
- ORM: n/a
- System Database: MS SQL Server 2017

4. Solution Overview

4.1. Introduction

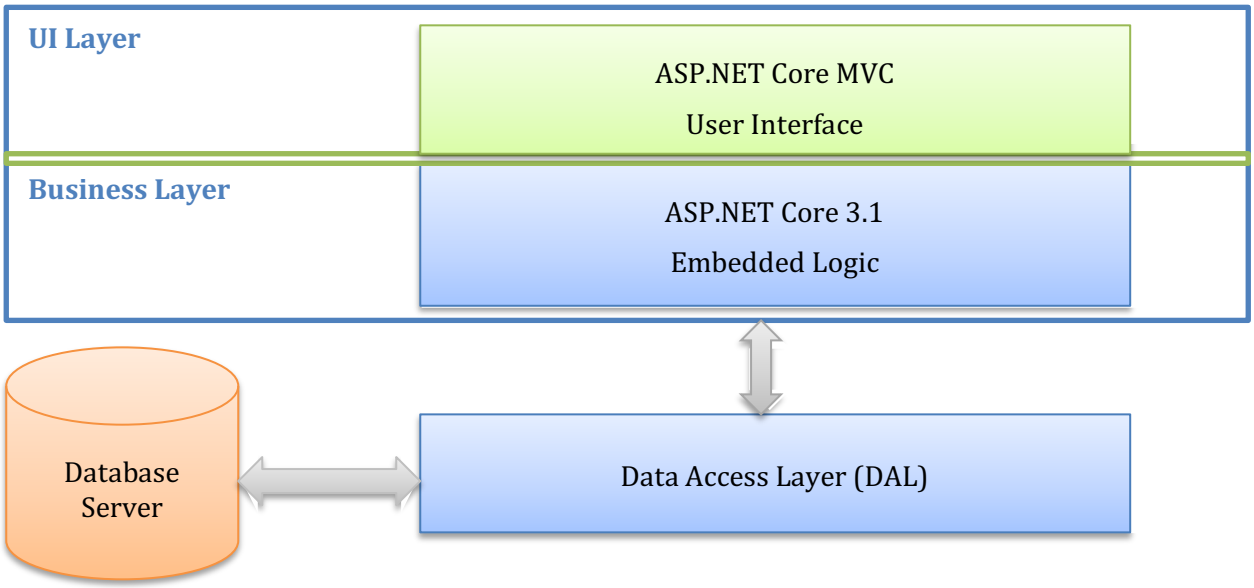
Suggested solution will be developed using rapid development principles with a focus on 3 key parts:

- RAD – Rapid Application Development techniques focusing on streamlined development and allowing for code reuse to minimize development time;
- A Streamlined User Interface that is fully functional while targeting minimal clicks to achieve all functionality;
- Efficient use of Object Oriented Design and Object Oriented Programming techniques that yields a middle business tier allowing for scalability into alternate platforms (e.g. mobile, table, etc.)

Development methodologies adhere to Agile techniques as much as possible (e.g. daily stand up meeting, scrum master, etc.).

4.2. Architecture Highlights

The next diagram describes high-level architecture of the system and shows the main components of the system.



Database layer

The database layer provides storage for all application data.

Data Access Layer

The Data Access Layer provides a low-level interface in order to access the data stored in the Database. It contains a set of classes which are used for inserting and updating the data.

Business Layer

The Business / Service Layer encapsulates implementation of application business logic. This is where the primary logic of the system is housed; this allows for any business logic changes to be only performed once, versus multiple times across the system.

UI layer

The UI (User Interface) layer is implemented via the Model View Controller software design. MVC is a non-proprietary model that functions as a pattern with which to build User Interfaces. We will be using Microsoft's implementation of MVC that is applicable to ASP.Net Core. The purpose of using this architectural pattern is that it provides standardization for future development and allows experienced developers a quicker understanding of how the UI is designed.

4.3. Suggested Tools and Technologies

Component	Technology
Database	Microsoft SQL Server 2017
UI Platform	ASP.NET Core 3.1 ASP.Net Core MVC

5. Implementation Plan

5.1. Overview

Considering the project development cycle, the proposed implementation plan is based on an iterative approach and agile development practices. The entire project timeline is divided by 2 week iterations. Each of the iterations ends with an optional demonstration of the developed functionality and a meeting with project stakeholders to review results. This should allow for the early detection of potential problems and quick reaction to any change in requirements.

5.2. Project Team

Project cost and timeline calculations are based on team structure presented on the diagram below.

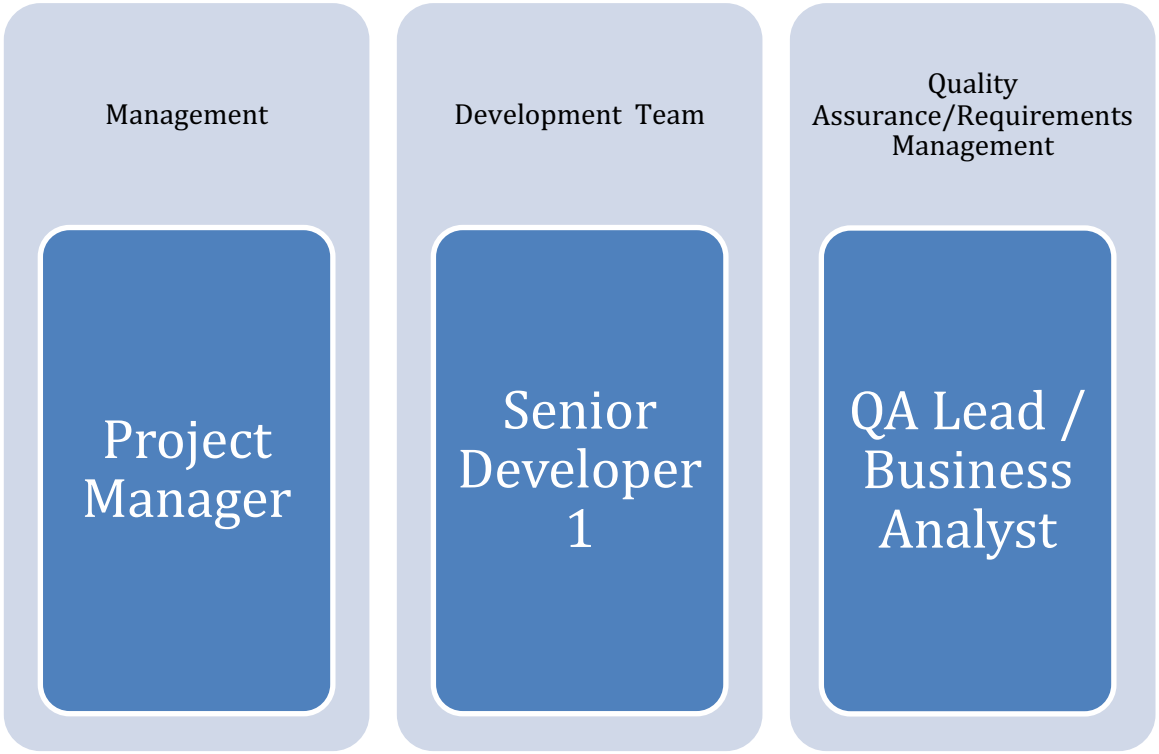


Diagram 1 – Team structure

Three (3) project plans have been provided. Depending on the approved scope, the team will vary. All team members listed in the above diagram will be 100% dedicated to the project, unless otherwise indicated in the project plan. Also, the QA / Testing role may be performed by the senior developer due to the smaller scope size of the project.

5.3. Project Timeline

Overview

As described above, three (3) estimates were requested for the social media management solution. A short description of each is provided below:

A) Facebook Share Link Creation (the "plugin") - This creates a very basic set of functionality where you can see a list of existing posts and create new posts that allow for the one click sharing to Facebook. It is the same functionality that was discussed on 4/30 (available for recording if requested). Also, as we discussed, this solution matches exactly what we were shown and has no authentication, but we do always recommend having authentication.

B) Hootsuite Clone MVP (Minimum Viable Product) - The MVP gives you the core set of functionality for a HootSuite Clone, but excludes any bells and whistles. Specifically, members will be able to grant access to the system to allow pasting to Facebook in their behalf. Members will have only a basic interface allowing them to login and grant Facebook access. System Admins will also be able to login, but will have the ability to create invitations for members via a link; create new scheduled Facebook posts to post at a pre-specified time; create, view, edit and delete scheduled posts; and have a landing page dashboard showing Facebook post success/failures (to allow for system monitoring). The MVP has the following items excluded:

- No Setup requests via email (no email requests from the system). An admin would need to login, copy/paste the link to a new email in their own inbox, then send it to the member in question for them to setup a new account

- Notifications - no email alerts are being sent

- Admin Dashboard - no data summaries showing posts, reach, new member sign ups, likes, engagements

- Client Mgmt - No UI to group clients together, no initial email welcome, no test email functionality

- Analytics - no retrieval of impressions (above excluded section is presenting the data, this is retrieving the data), no member summaries, no calculations showing effectiveness of 1 campaign vs another

- No Mail service setup (above excluded section would be using the mail engine created here)

- No Project Manager

C) Hootsuite Clone Full - This is the estimate that will include all the baseline functionality, plus all the excluded items above.

The following diagram represents project flow and major milestones during the course of the project. A short description of each iteration is provided further in this section. Detailed work breakdown structure, list of deliverables and dependencies can be found in the project plan accompanying this document.

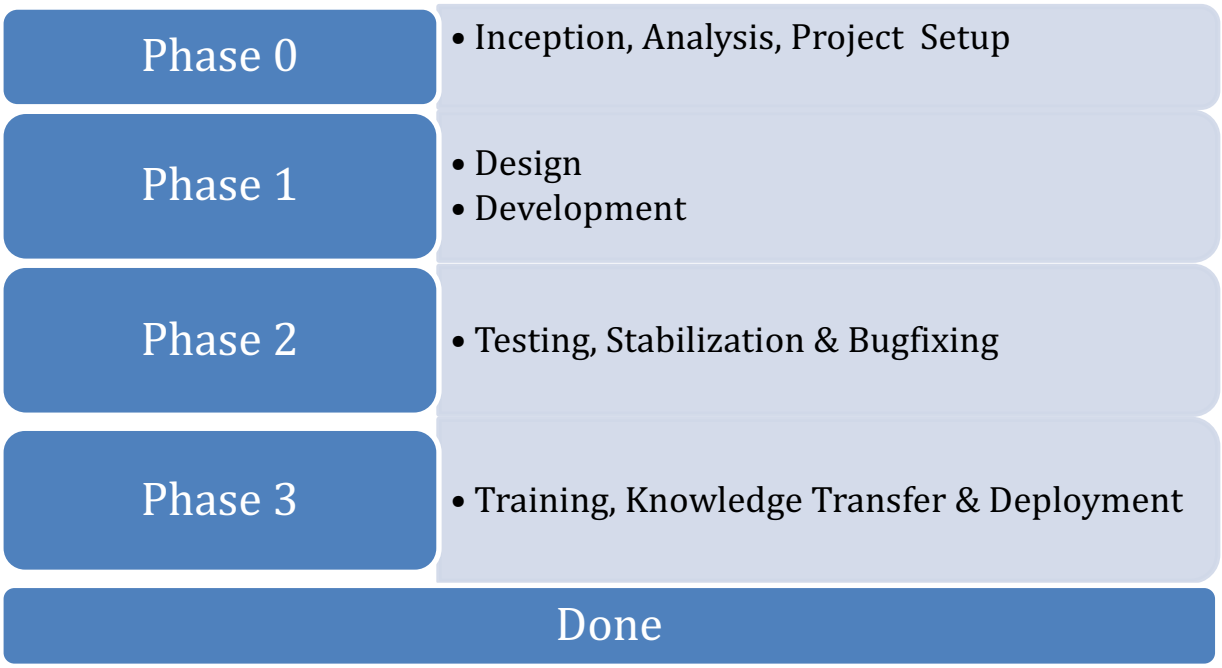


Diagram 2 – Project flow and milestones

Each project plan adheres to the basic project flow described above, but differs in total scope. The scope for each project is described herein:

A) Facebook Share Link Creation (the "plugin") *

Duration	8 days
Estimated Efforts	88 man hours
Estimated Cost	$5,720.00

* NOTE – This functionality (A) is built in each of the project plans. The share link "plugin" is baseline functionality required for each of the project estimates and is also included in items (B) and (C) below.

B) Hootsuite Clone MVP (Minimum Viable Product)

Duration	34.625 days
Estimated Efforts	325 man hours
Estimated Cost	$21,125.00

C) Hootsuite Clone Full

Duration	64.37 days
Estimated Efforts	619 man hours
Estimated Cost	$40,235.00

Each of the three (3) estimates are attached to the end of this document as a Gantt Chart and show project delivery dates, timelines, resource allocations, milestones, etc.

5.4. Project Hosting

Microsoft Azure Hosting

After building an application, it must be hosted. Historically, hosting was done via a Virtual Machine or a service that communicated with a virtual machine. This is an older model that yields problems such as out of date environments, hardware failures, lack of redundancy and security lapses to name a few.

Application Service hosting provides a higher level of granularity and all but eliminates the above problems. Microsoft Azure is the solution recommend by Engineation. We have included a high level overview about Microsoft Azure and details how each of the above problems are addressed by Azure:

Microsoft Azure Overview – Microsoft Azure is a collection of various cloud computing services, including remotely hosted and managed versions of proprietary Microsoft technologies, and open technologies, such as various Linux distributions deployable inside a virtual machine.

General clients: Adobe, HP, 3M, BlueCross BlueShield, BMW, LexisNexis, Thyssenkrupp Elevator, Walgreens and thousands more household names.

Out of Date Environments – Azure has added 1000+ new capabilities in the past year and tens of thousands in the last decade. Build on the latest advancements in AI, blockchain, Kubernetes, containers, and databases to keep you ahead of the curve.

Hardware Failure - Azure has operated core compute services at 99.995% uptime in the last 12 months. In addition, they are continuing to add even higher redundancy via the following initiatives: safe deployment practices, storage-account level failover, expanding availability zones, Project Tardigrade, low to zero impactful maintenance, & fault injection and stress testing.

Lack of Redundancy - Applications on Azure take advantage of high availability, disaster recovery, and backups on Azure's global network. Redundancies can also be added based on business needs, as well as maintaining compliance within a given legal and regulatory requirements of data.

Security – Microsoft invests $1B+ in security R&D and 3,500 cyber security experts. Security is foundational for Azure. Take advantage of multi-layered security provided across physical datacenters, infrastructure, and operations with cyber security experts actively monitoring to protect your business assets and data.

Hosting Options

Based on the three (3) requested estimates, App Service and Database hosting is required. Two (2) hosting options are provided.

For the "plugin" solution, we recommend the minimum level of hardware, whereas the MVP & Full solutions are recommended to have a slightly higher level of hardware to yield better performance.

A) "Plugin" Hosting - Standard – Minimum level recommended for any production workload.
- App Service (Code) - 146/month
- SQL Database - 59/month

B) MVP & Full Hosting – Premium – Better performance and scale. Faster processor, SSD storage, and double memory-to-core ratio compared to Standard.
- App Service (Code) - 292/month
- SQL Database – 59/month

Each SQL Database has a maximum storage of 250 GB. Additional storage can be added at 0.50/GB/month.

An SSL Certificate (70/year) is recommended to ensure secure transmission of data between the server and the end user, admin or member.

5.5. Development Process Highlights

Agile Execution Approach

At Engineation, we are firm believers in the value that agile practices bring to a software project. We encourage a Scrum-based approach as the golden standard of modern software project management, extending it at the same time with additional techniques and tools enabling an agile project to be executed by a distributed team, spanning companies, locations and time zones.

We believe the following practice mix would make sense for this project:

- Centralized transparent backlog management;
- Daily "internal" Scrum meetings of Engineation team;
- Daily "external" Scrum meetings, or Scrum of Scrums, with at least client project leadership and optionally other vendor representatives as needed;
- Daily story status updates by Engineation project manager (playing the role of Scrum Master);
- Regular project status reviews with client stakeholders, either on a weekly basis or as part of iteration closure meetings;
- "End of iteration" demos for the client's product owners and other business stakeholders, when possible based on VFP release;
- Periodic "backlog grooming" meetings if needed;
- All-team planning meetings in case more than one iteration is planned or project scope materially changes in mid-course;
- Retrospectives at the end of iterations and/or releases;

Project Communications

Engineation is dedicated to making the development process completely transparent. We employ a wide range of communication tools, including email, instant messaging, telephone, video conferencing, and web-based collaboration services to ensure maximum team productivity and cohesion.

Below we list some typical challenges of a distributed environment and how we propose to minimize their impact on the project.

Project Tracking and Progress Monitoring

Current progress is tracked in an online project tracking tool of choice. Engineation recommends Atlassian JIRA as the default tool, but we are ready to use any tool the customer prefers.

Regardless of the tool, status and progress information for the user stories in the project backlog is updated on a daily basis.

Regular Status Reporting

Every project has periodic status reporting. Project status report is emailed to the agreed distribution list of client stakeholders and development team representatives on a regular basis, typically before regular status review meetings. The report usually includes:

- Project dashboard, highlighting the crucial information about the project status;
- Completed and planned tasks and their statuses;
- Information on upcoming delivery and dependencies;
- Summary of current outstanding risks, issues and action lists for both sides.

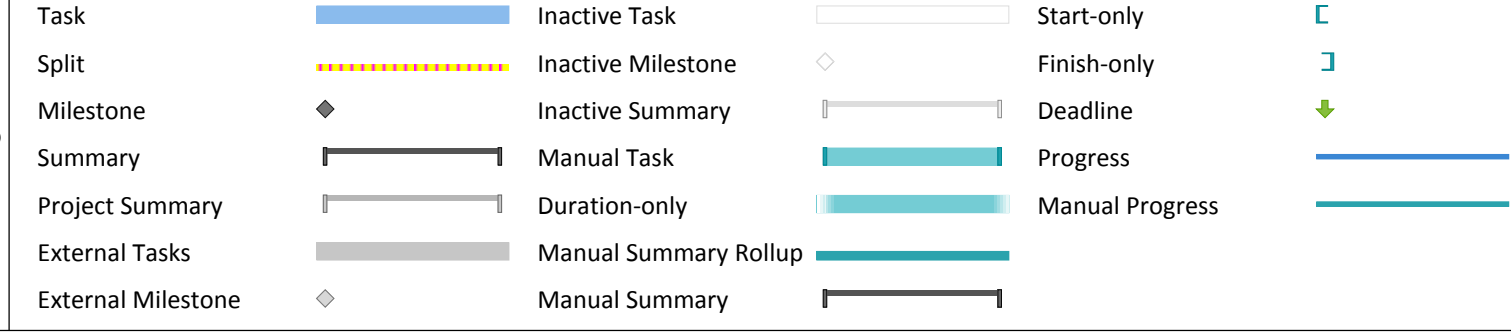
6. Risks

We identified a risk associated with the project and partnership. The table below indicates our estimation of the probability and actions to be taken.

Risk	Probability	Mitigation/Comments
Availability of project owner(s)	Low	If owners are not available, it can affect the timeline.

ID	% Comple	Task Name	Work	Cost	Duration	Start	Finish	Notes	Resource Names
1	**0%**	**NC Chiropractic Assn-Hootsuite Clone Full**	**619 hrs**	**$40,235.00**	**515 hrs**	**Mon 6/1/20**	**Mon 8/31/20**		
2	**100%**	**Part 1: Inception & Analysis**	**0 hrs**	**$0.00**	**0 hrs**	**Mon 6/1/20**	**Mon 6/1/20**		
3	100%	Investigation	0 hrs	$0.00	0 hrs	Mon 6/1/20	Mon 6/1/20		Software Architect
4	100%	Requirements Analysis	0 hrs	$0.00	0 hrs	Mon 6/1/20	Mon 6/1/20		Software Architect
5	**0%**	**Part 2: Design & Development**	**434 hrs**	**$28,210.00**	**386 hrs**	**Tue 6/2/20**	**Fri 8/7/20**		
6	**0%**	**GRAPHIC DESIGN**	**48 hrs**	**$3,120.00**	**48 hrs**	**Tue 6/2/20**	**Tue 6/9/20**		
7	0%	UI Template	24 hrs	$1,560.00	24 hrs	Tue 6/2/20	Thu 6/4/20	Overall Template for app (NOTE that is is required for the plugin)	Graphic Designer
8	0%	Client User Interface	8 hrs	$520.00	8 hrs	Fri 6/5/20	Fri 6/5/20	Need UI for client to maintain / update (FB) links and info.	Graphic Designer
9	0%	Admin User Interface	16 hrs	$1,040.00	16 hrs	Mon 6/8/20	Tue 6/9/20	UI Need to allow them to post	Graphic Designer
10	**0%**	**DEVELOPMENT**	**386 hrs**	**$25,090.00**	**386 hrs**	**Tue 6/2/20**	**Fri 8/7/20**		
11	**0%**	**ENVIRONMENT SETUP**	**8 hrs**	**$520.00**	**8 hrs**	**Tue 6/2/20**	**Tue 6/2/20**		
12	0%	Github Setup	2 hrs	$130.00	2 hrs	Tue 6/2/20	Tue 6/2/20		Senior Developer
13	0%	JIRA Setup	2 hrs	$130.00	2 hrs	Tue 6/2/20	Tue 6/2/20		Senior Developer
14	0%	IDE Setup	2 hrs	$130.00	2 hrs	Tue 6/2/20	Tue 6/2/20		Senior Developer
15	0%	Development SQL Server Setup	2 hrs	$130.00	2 hrs	Tue 6/2/20	Tue 6/2/20		Senior Developer
16	**0%**	**CLIENT USER**	**96 hrs**	**$6,240.00**	**96 hrs**	**Wed 6/3/20**	**Thu 6/18/20**		
17	0%	Setup request - Join portal 24 hrs (REQUEST FROM ADMIN)	16 hrs	$1,040.00	16 hrs	Wed 6/3/20	Thu 6/4/20	Can send muitple times via admin functionality	Senior Developer

Project: NC Chiropractic Assn-Hoo
Date: Fri 5/22/20



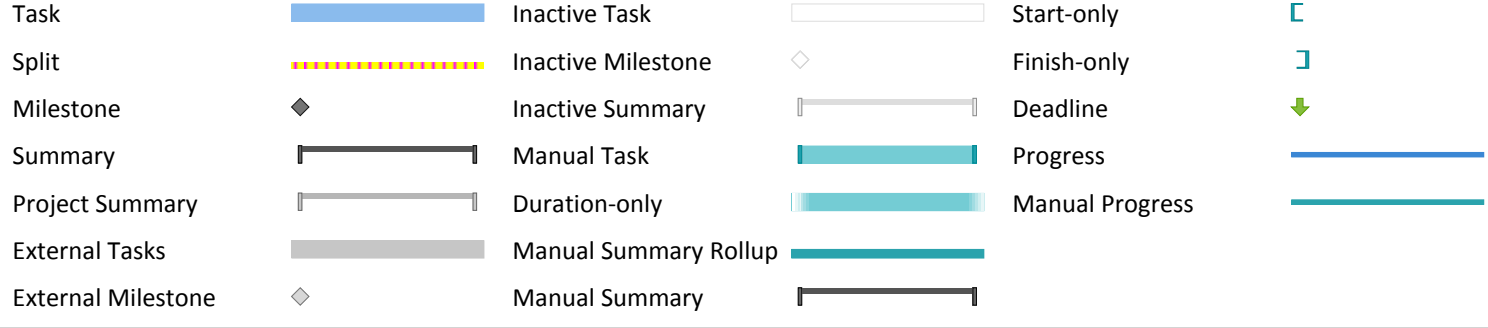
ID	% Comple	Task Name	Work	Cost	Duration	Start	Finish	Notes	Resource Names
18	0%	Setup request via email - Email integration for setup & forgot	24 hrs	$1,560.00	24 hrs	Fri 6/5/20	Tue 6/9/20	Will use Mail access module.	Senior Developer
19	0%	Signup - Client Sign up for service (DATA ENTRY FOR CLIENT)	16 hrs	$1,040.00	16 hrs	Wed 6/10/20	Thu 6/11/20	Setup in < 24 hours	Senior Developer
20	0%	Facebook link - Client Grant access to NC Chiro to post directly to social media (TOKEN TO FB)	24 hrs	$1,560.00	24 hrs	Fri 6/12/20	Tue 6/16/20	Likely will be a token that we are granted and store. OAuth possible.	Senior Developer
21	0%	Authentication - 2 Factor Authentication	16 hrs	$1,040.00	16 hrs	Wed 6/17/20	Thu 6/18/20	Setup 2 Security questions or SoftKey for 2FA	Senior Developer
22	**0%**	**ADMIN USER**	**188 hrs**	**$12,220.00**	**188 hrs**	**Fri 6/19/20**	**Wed 7/22/20**		
23	**0%**	**Manage Campaign**	**80 hrs**	**$5,200.00**	**80 hrs**	**Fri 6/19/20**	**Thu 7/2/20**		
24	0%	Scheduler - Creates monthly schedule for posts.	24 hrs	$1,560.00	24 hrs	Fri 6/19/20	Tue 6/23/20		Senior Developer
25	0%	Manage - Campaigns (Create/Read/Update/Delete)	16 hrs	$1,040.00	16 hrs	Wed 6/24/20	Thu 6/25/20		Senior Developer
26	0%	Post - Campaigns to client's FB Pages using Scheduler	24 hrs	$1,560.00	24 hrs	Fri 6/26/20	Tue 6/30/20		Senior Developer
27	0%	Notifications - Send alerts to Cli	16 hrs	$1,040.00	16 hrs	Wed 7/1/20	Thu 7/2/20		Senior Developer
28	**0%**	**Dashboard**	**40 hrs**	**$2,600.00**	**40 hrs**	**Fri 7/3/20**	**Thu 7/9/20**		
29	0%	Summary - Post Success failures / Facebook posts that fail (count only)	8 hrs	$520.00	8 hrs	Fri 7/3/20	Fri 7/3/20		Senior Developer

Project: NC Chiropractic Assn-Hoo
Date: Fri 5/22/20

Task		Inactive Task		Start-only	
Split		Inactive Milestone		Finish-only	
Milestone		Inactive Summary		Deadline	
Summary		Manual Task		Progress	
Project Summary		Duration-only		Manual Progress	
External Tasks		Manual Summary Rollup			
External Milestone		Manual Summary			

ID	% Comple	Task Name	Work	Cost	Duration	Start	Finish	Notes	Resource Names
30	0%	Summary - Daily posts (Pie and/or Bar chart)	8 hrs	$520.00	8 hrs	Mon 7/6/20	Mon 7/6/20		Senior Developer
31	0%	Summary - Reach for all posts in last x days (Pie and/or Bar	8 hrs	$520.00	8 hrs	Tue 7/7/20	Tue 7/7/20		Senior Developer
32	0%	New Client Signup - Show list of new clients	8 hrs	$520.00	8 hrs	Wed 7/8/20	Wed 7/8/20		Senior Developer
33	0%	Summary for all Clients effectiveness of engagement (BY ALL CLIENTS - ANALYTICS	8 hrs	$520.00	8 hrs	Thu 7/9/20	Thu 7/9/20		Senior Developer
34	**0%**	**Client Management**	**68 hrs**	**$4,420.00**	**68 hrs**	**Fri 7/10/20**	**Wed 7/22/20**		
35	0%	Maintain access to social media	8 hrs	$520.00	8 hrs	Fri 7/10/20	Fri 7/10/20		Senior Developer
36	0%	UI to Group Clients for Campaign Use	40 hrs	$2,600.00	40 hrs	Mon 7/13/20	Fri 7/17/20		Senior Developer
37	0%	New Client Signup - Initial Setup - assign to group, email system welcome, initial test FB	8 hrs	$520.00	8 hrs	Mon 7/20/20	Mon 7/20/20		Senior Developer
38	0%	Grid to allow for multiple clients to sign up (streamline of signup workflow)	12 hrs	$780.00	12 hrs	Tue 7/21/20	Wed 7/22/20		Senior Developer
39	**0%**	**"PLUGIN"**	**40 hrs**	**$2,600.00**	**40 hrs**	**Wed 7/22/20**	**Wed 7/29/20**	**This is functionality v**	
40	0%	Create DB structure to manage and save assets (images, text, etc)	24 hrs	$1,560.00	24 hrs	Wed 7/22/20	Mon 7/27/20		Senior Developer
41	0%	Create and name campaign. Save status Posted / Not-Posted	8 hrs	$520.00	8 hrs	Mon 7/27/20	Tue 7/28/20		Senior Developer
42	0%	Share Dropbox Link type	8 hrs	$520.00	8 hrs	Tue 7/28/20	Wed 7/29/20		Senior Developer

Project: NC Chiropractic Assn-Hoo
Date: Fri 5/22/20



ID	% Comple	Task Name	Work	Cost	Duration	Start	Finish	Notes	Resource Names
43	**0%**	**ANALYTICS**	**18 hrs**	**$1,170.00**	**18 hrs**	**Wed 7/29/2(**	**Fri 7/31/20**		
44	0%	Get likes from Client facebook link	8 hrs	$520.00	8 hrs	Wed 7/29/20	Thu 7/30/20		Senior Developer
45	0%	Get impressions from Client facebook links	2 hrs	$130.00	2 hrs	Thu 7/30/20	Thu 7/30/20		Senior Developer
46	0%	Summarize for all Clients effectiveness of engagement (BY SINGLE CLIENT)	8 hrs	$520.00	8 hrs	Thu 7/30/20	Fri 7/31/20		Senior Developer
47	**0%**	**SYSTEM PROCESSES**	**28 hrs**	**$1,820.00**	**28 hrs**	**Fri 7/31/20**	**Thu 8/6/20**		
48	0%	Update Analytics daily (for each FB connection)	20 hrs	$1,300.00	20 hrs	Fri 7/31/20	Wed 8/5/20		Senior Developer
49	0%	Post Content based on schedule (reuse post code)	4 hrs	$260.00	4 hrs	Wed 8/5/20	Wed 8/5/20		Senior Developer
50	0%	Send Notifications to clients of posted content	4 hrs	$260.00	4 hrs	Wed 8/5/20	Thu 8/6/20		Senior Developer
51	**0%**	**MAIL SERVICE**	**8 hrs**	**$520.00**	**8 hrs**	**Thu 8/6/20**	**Fri 8/7/20**		
52	0%	Mail Service Setup	8 hrs	$520.00	8 hrs	Thu 8/6/20	Fri 8/7/20		Senior Developer
53	**0%**	**Part 3: Testing, Stabilization & Bugfixing**	**105 hrs**	**$6,825.00**	**105 hrs**	**Fri 8/7/20**	**Wed 8/26/2(**		
54	**0%**	**Testing (25% of dev task)**	**95 hrs**	**$6,175.00**	**95 hrs**	**Fri 8/7/20**	**Tue 8/25/20**		
55	0%	Client User	24 hrs	$1,560.00	24 hrs	Fri 8/7/20	Wed 8/12/20		Senior Developer
56	0%	Admin User	47 hrs	$3,055.00	47 hrs	Wed 8/12/20	Thu 8/20/20		Senior Developer
57	0%	Plugin	10 hrs	$650.00	10 hrs	Thu 8/20/20	Fri 8/21/20		Senior Developer
58	0%	Analytics	5 hrs	$325.00	5 hrs	Fri 8/21/20	Fri 8/21/20		Senior Developer
59	0%	System Processes	7 hrs	$455.00	7 hrs	Mon 8/24/20	Mon 8/24/20		Senior Developer
60	0%	Mail Service	2 hrs	$130.00	2 hrs	Mon 8/24/20	Tue 8/25/20		Senior Developer
61	0%	Bugfixing (10%)	10 hrs	$650.00	10 hrs	Tue 8/25/20	Wed 8/26/20		Senior Developer

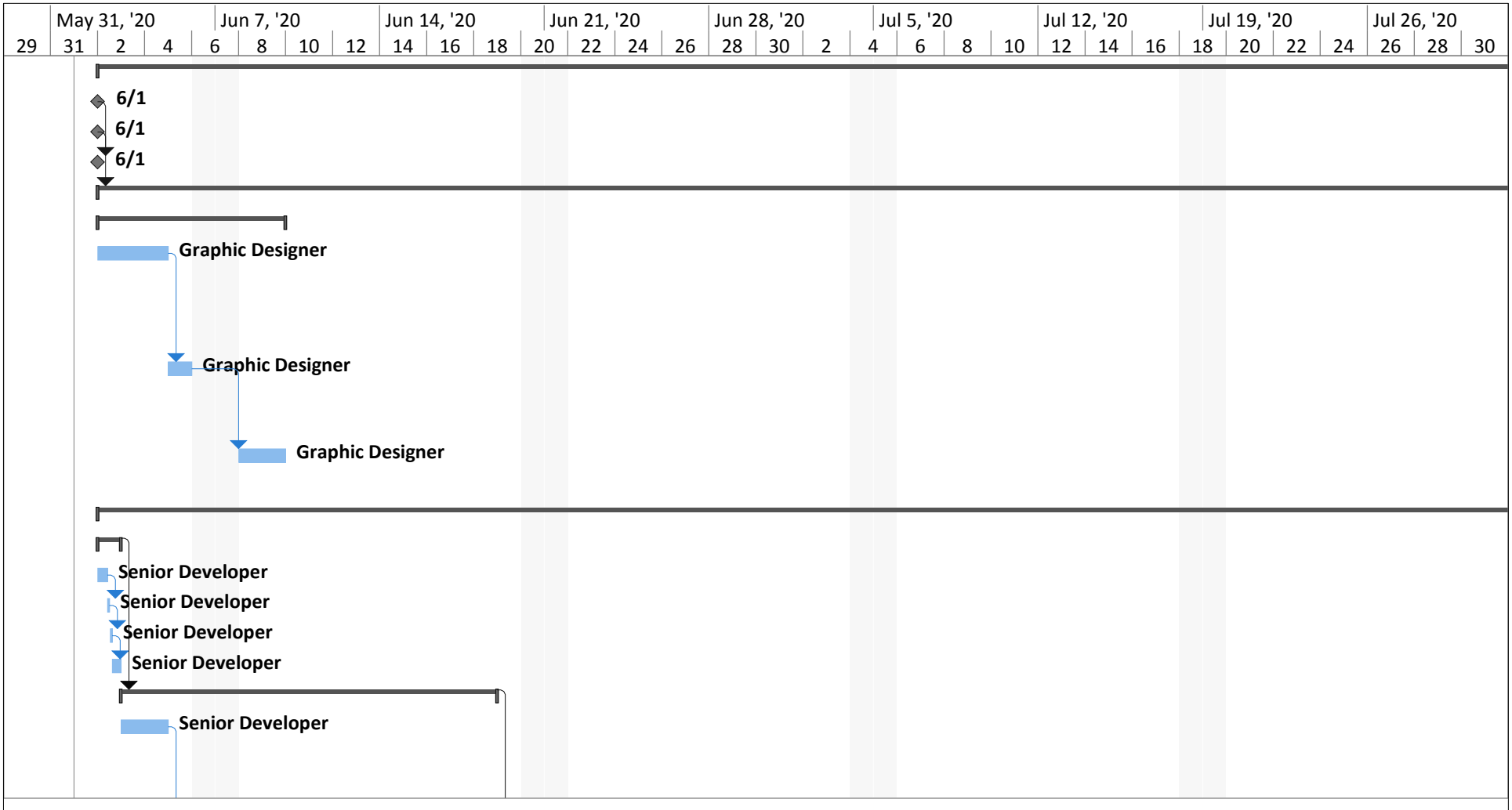
Project: NC Chiropractic Assn-Hoo
Date: Fri 5/22/20

Task		Inactive Task		Start-only	
Split		Inactive Milestone		Finish-only	
Milestone		Inactive Summary		Deadline	
Summary		Manual Task		Progress	
Project Summary		Duration-only		Manual Progress	
External Tasks		Manual Summary Rollup			
External Milestone		Manual Summary			

ID	% Comple	Task Name	Work	Cost	Duration	Start	Finish	Notes	Resource Names
62	**0%**	**Part 4: Training, Knowledge Transfer & Deployment**	**24 hrs**	**$1,560.00**	**24 hrs**	**Wed 8/26/20**	**Mon 8/31/20**		
63	**0%**	**Deployment**	**20 hrs**	**$1,300.00**	**20 hrs**	**Wed 8/26/20**	**Fri 8/28/20**		
64	0%	Production Environment Setup	16 hrs	$1,040.00	16 hrs	Wed 8/26/20	Fri 8/28/20		Senior Developer
65	0%	Deployment to Production	4 hrs	$260.00	4 hrs	Fri 8/28/20	Fri 8/28/20		Senior Developer
66	0%	Documentation	4 hrs	$260.00	4 hrs	Fri 8/28/20	Mon 8/31/20		Senior Developer
67	0%	Project Management	56 hrs	$3,640.00	56 hrs	Tue 6/2/20	Wed 6/10/20		Project Manager

Project: NC Chiropractic Assn-Hoo
Date: Fri 5/22/20

Task		Inactive Task		Start-only	
Split		Inactive Milestone		Finish-only	
Milestone		Inactive Summary		Deadline	
Summary		Manual Task		Progress	
Project Summary		Duration-only		Manual Progress	
External Tasks		Manual Summary Rollup			
External Milestone		Manual Summary			



Project: NC Chiropractic Assn-Hoo
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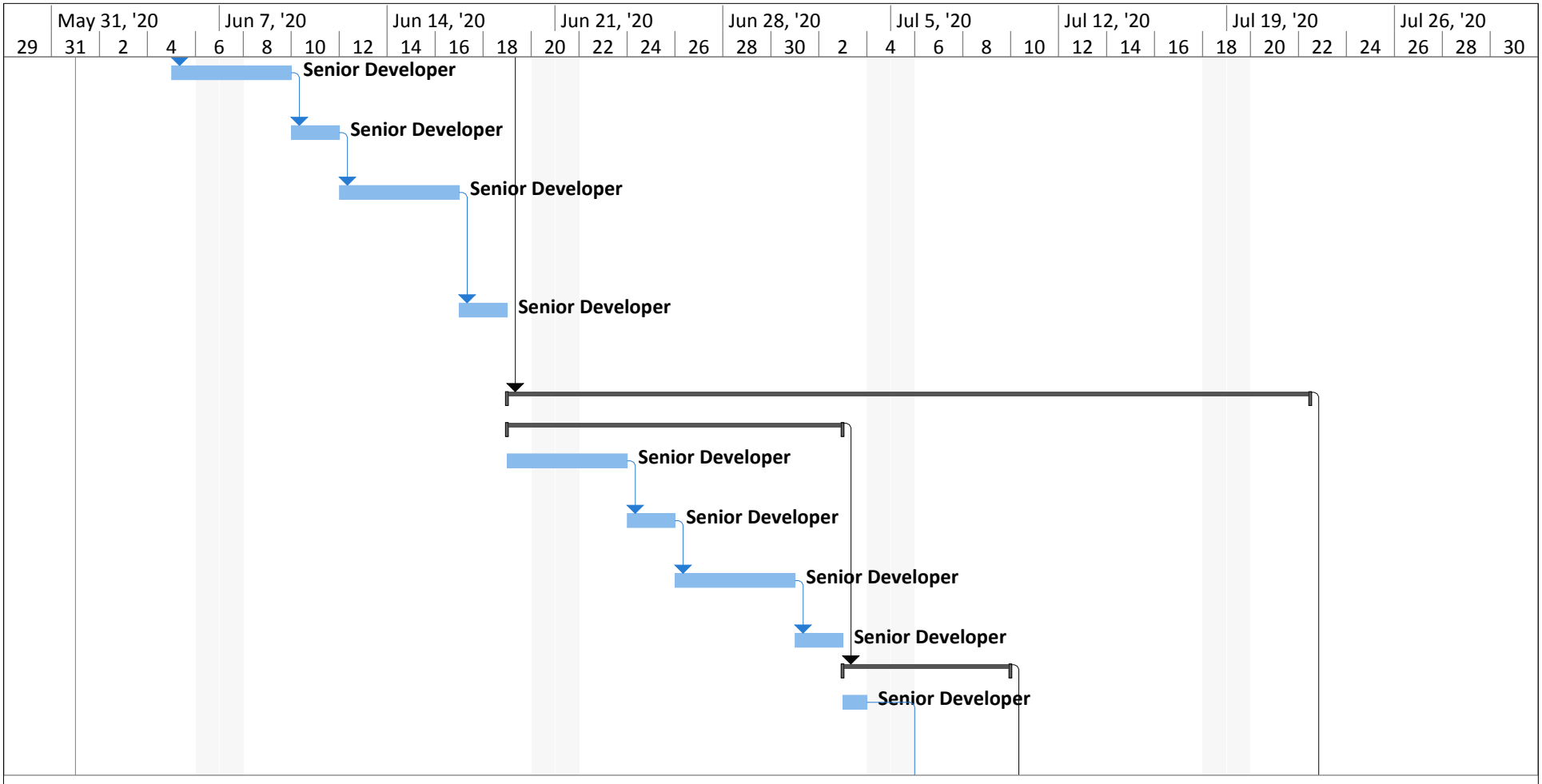

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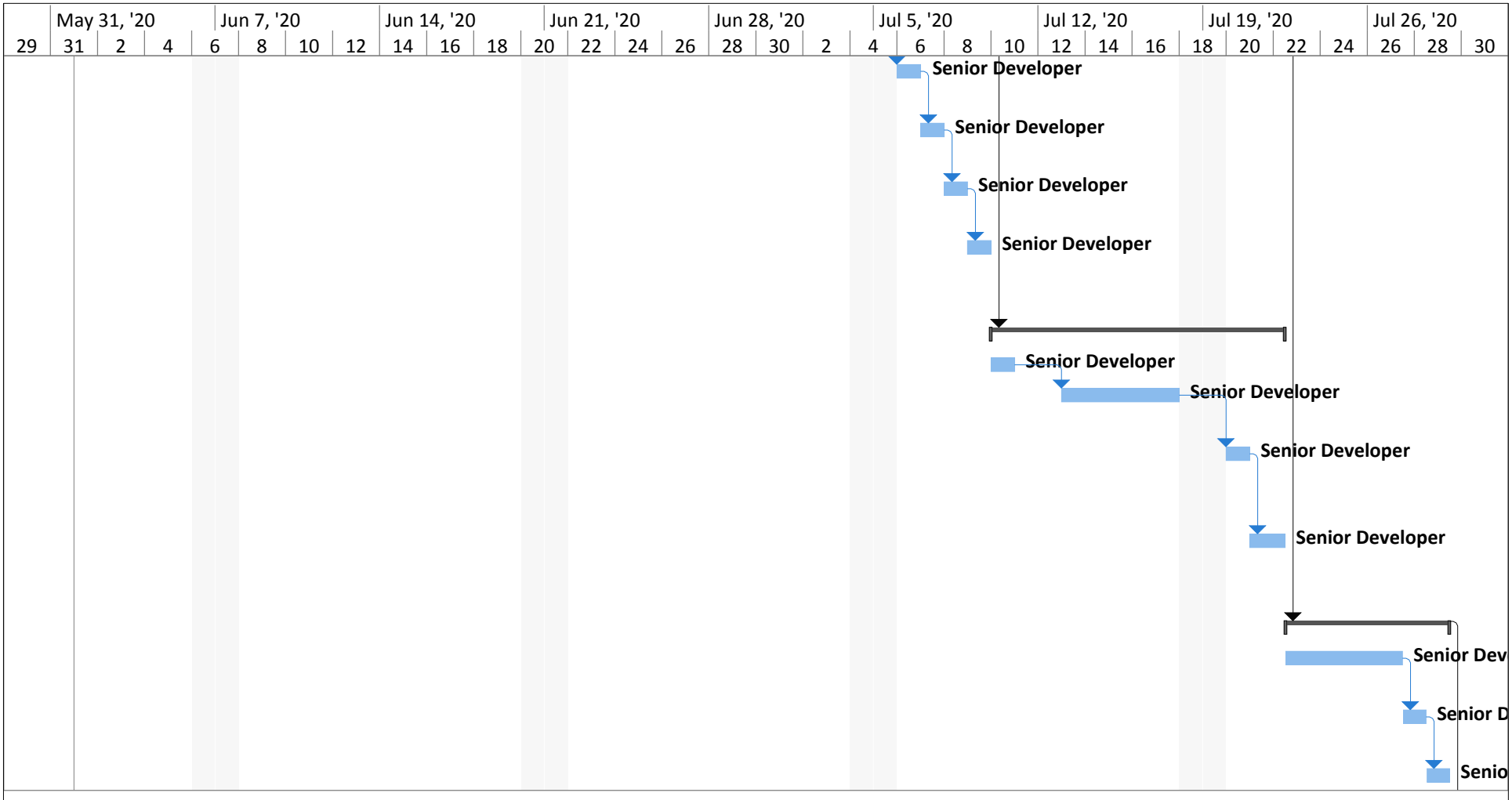

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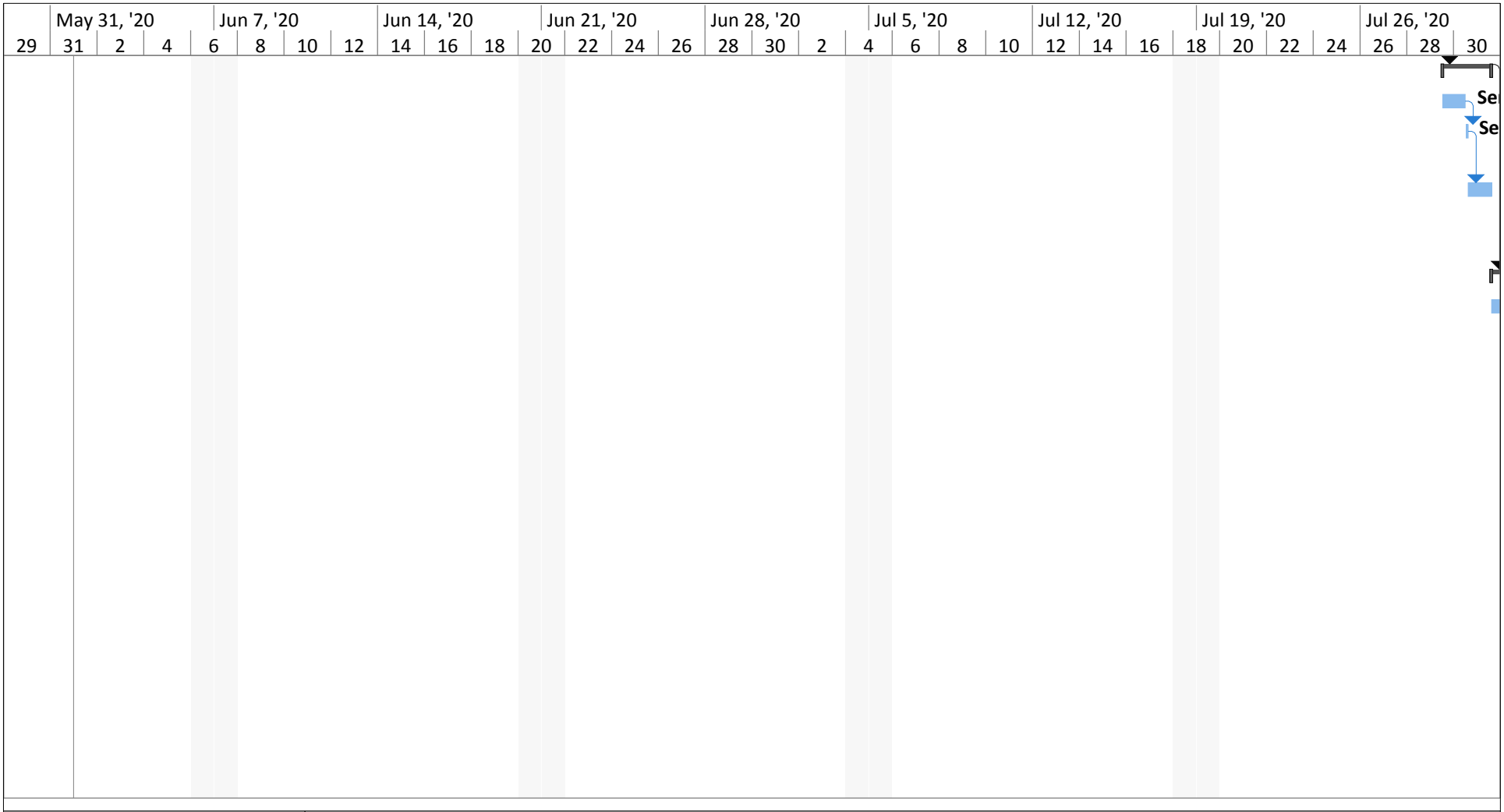

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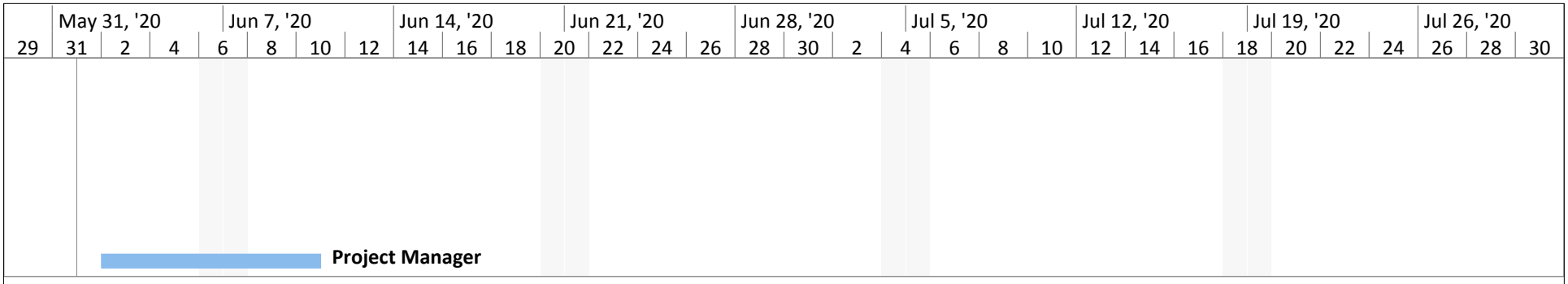

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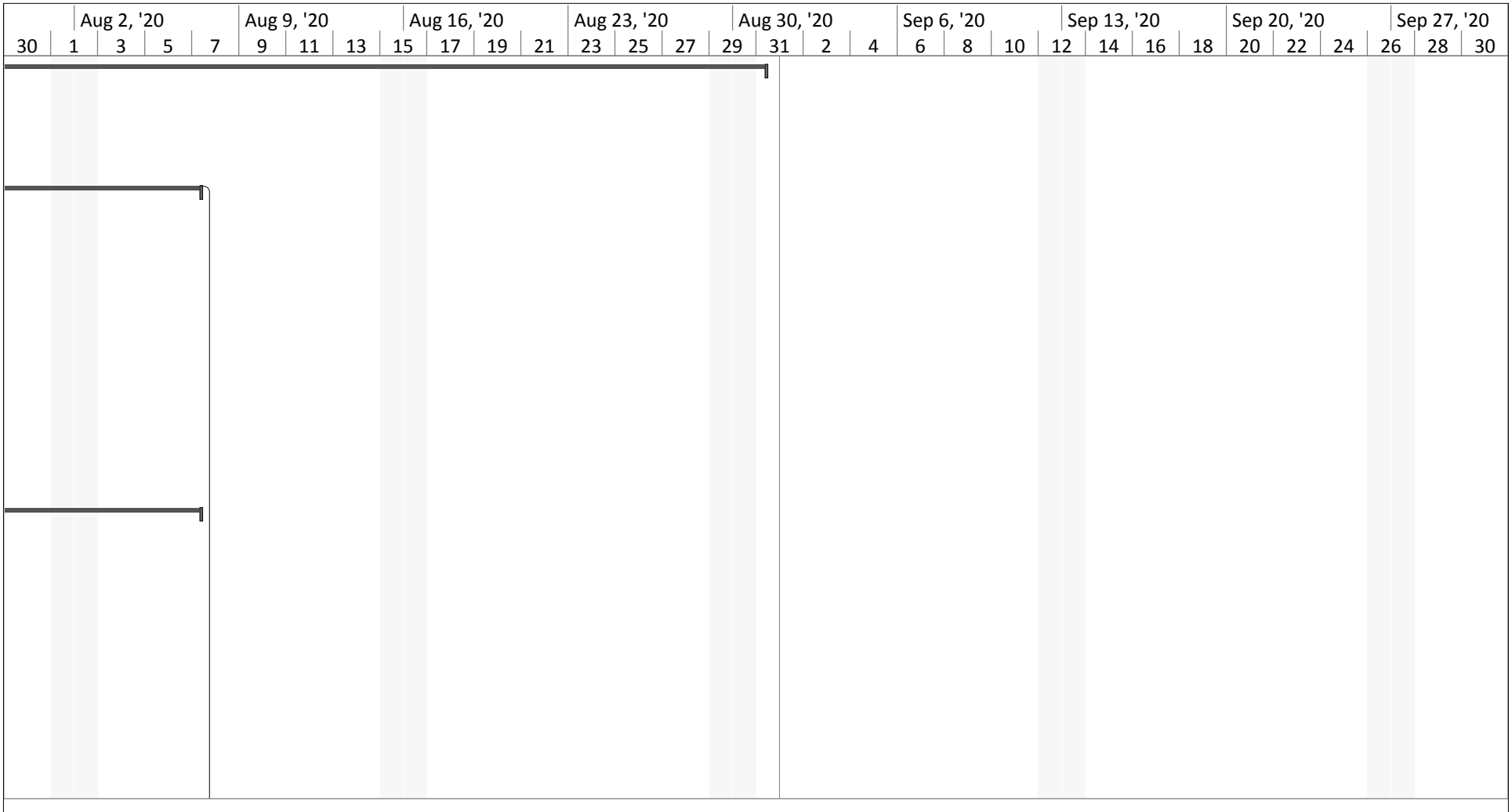

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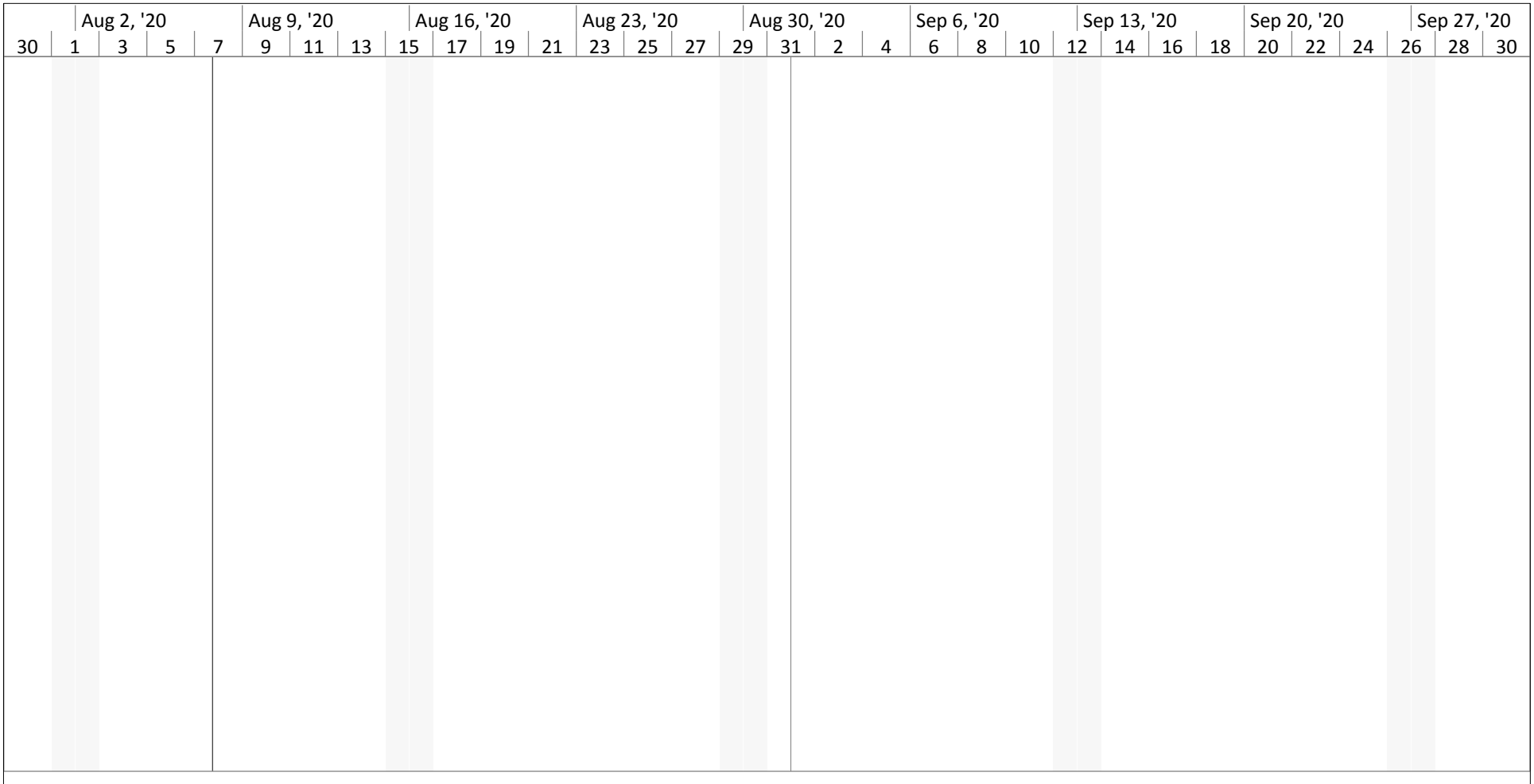

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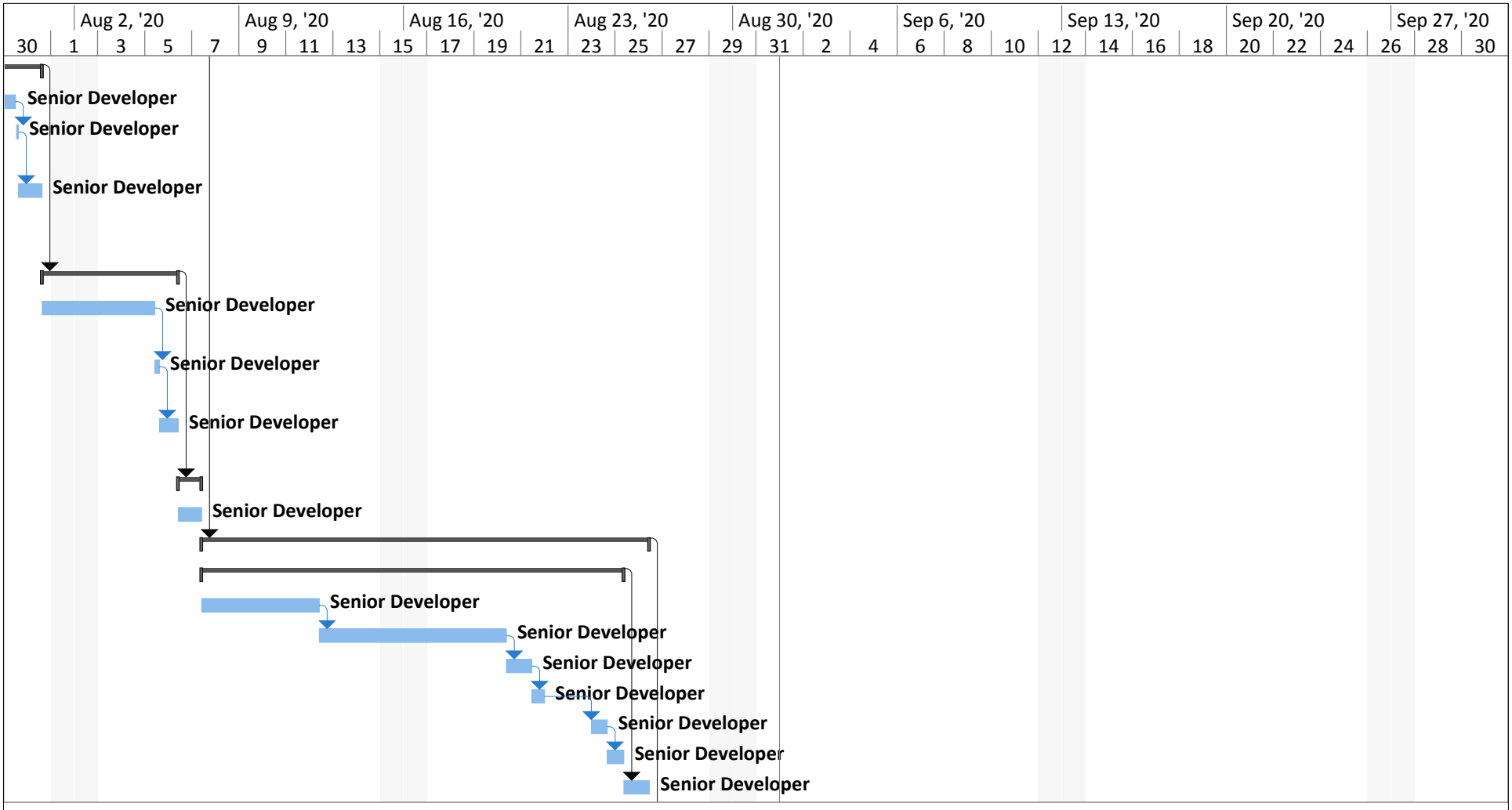

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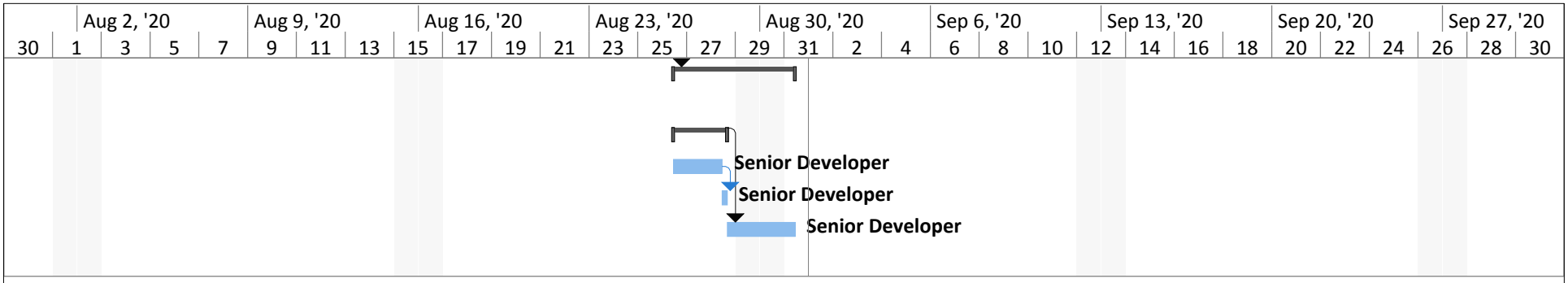

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ID	% Comple	Task Name	Work	Cost	Duration	Start	Finish	Notes	Resource Names
1	**0%**	**NC Chiropractic Assn-Hootsuite Clone Full**	**604 hrs**	**$39,260.00**	**500 hrs**	**Mon 6/1/20**	**Thu 8/27/20**		
2	**100%**	**Part 1: Inception & Analysis**	**0 hrs**	**$0.00**	**0 hrs**	**Mon 6/1/20**	**Mon 6/1/20**		
3	100%	Investigation	0 hrs	$0.00	0 hrs	Mon 6/1/20	Mon 6/1/20		Software Architect
4	100%	Requirements Analysis	0 hrs	$0.00	0 hrs	Mon 6/1/20	Mon 6/1/20		Software Architect
5	**0%**	**Part 2: Design & Development**	**422 hrs**	**$27,430.00**	**374 hrs**	**Tue 6/2/20**	**Wed 8/5/20**		
6	**0%**	**GRAPHIC DESIGN**	**48 hrs**	**$3,120.00**	**48 hrs**	**Tue 6/2/20**	**Tue 6/9/20**		
7	0%	UI Template	24 hrs	$1,560.00	24 hrs	Tue 6/2/20	Thu 6/4/20	Overall Template for app (NOTE that is is required for the plugin)	Graphic Designer
8	0%	Client User Interface	8 hrs	$520.00	8 hrs	Fri 6/5/20	Fri 6/5/20	Need UI for client to maintain / update (FB) links and info.	Graphic Designer
9	0%	Admin User Interface	16 hrs	$1,040.00	16 hrs	Mon 6/8/20	Tue 6/9/20	UI Need to allow them to post	Graphic Designer
10	**0%**	**DEVELOPMENT**	**374 hrs**	**$24,310.00**	**374 hrs**	**Tue 6/2/20**	**Wed 8/5/20**		
11	**0%**	**ENVIRONMENT SETUP**	**8 hrs**	**$520.00**	**8 hrs**	**Tue 6/2/20**	**Tue 6/2/20**		
12	0%	Github Setup	2 hrs	$130.00	2 hrs	Tue 6/2/20	Tue 6/2/20		Senior Developer
13	0%	JIRA Setup	2 hrs	$130.00	2 hrs	Tue 6/2/20	Tue 6/2/20		Senior Developer
14	0%	IDE Setup	2 hrs	$130.00	2 hrs	Tue 6/2/20	Tue 6/2/20		Senior Developer
15	0%	Development SQL Server Setup	2 hrs	$130.00	2 hrs	Tue 6/2/20	Tue 6/2/20		Senior Developer
16	**0%**	**CLIENT USER**	**96 hrs**	**$6,240.00**	**96 hrs**	**Wed 6/3/20**	**Thu 6/18/20**		
17	0%	Setup request - Join portal 24 hrs (REQUEST FROM ADMIN)	16 hrs	$1,040.00	16 hrs	Wed 6/3/20	Thu 6/4/20	Can send muitple times via admin functionality	Senior Developer

Project: NC Chiropractic Assn-Hoo
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18	0%	Setup request via email - Email integration for setup & forgot	24 hrs	$1,560.00	24 hrs	Fri 6/5/20	Tue 6/9/20	Will use Mail access module.	Senior Developer
19	0%	Signup - Client Sign up for service (DATA ENTRY FOR CLIENT)	16 hrs	$1,040.00	16 hrs	Wed 6/10/20	Thu 6/11/20	Setup in < 24 hours	Senior Developer
20	0%	Facebook link - Client Grant access to NC Chiro to post directly to social media (TOKEN TO FB)	24 hrs	$1,560.00	24 hrs	Fri 6/12/20	Tue 6/16/20	Likely will be a token that we are granted and store. OAuth possible.	Senior Developer
21	0%	Authentication - 2 Factor Authentication	16 hrs	$1,040.00	16 hrs	Wed 6/17/20	Thu 6/18/20	Setup 2 Security questions or SoftKey for 2FA	Senior Developer
22	**0%**	**ADMIN USER**	**176 hrs**	**$11,440.00**	**176 hrs**	**Fri 6/19/20**	**Mon 7/20/20**		
23	**0%**	**Manage Campaign**	**80 hrs**	**$5,200.00**	**80 hrs**	**Fri 6/19/20**	**Thu 7/2/20**		
24	0%	Scheduler - Creates monthly schedule for posts.	24 hrs	$1,560.00	24 hrs	Fri 6/19/20	Tue 6/23/20		Senior Developer
25	0%	Manage - Campaigns (Create/Read/Update/Delete)	16 hrs	$1,040.00	16 hrs	Wed 6/24/20	Thu 6/25/20		Senior Developer
26	0%	Post - Campaigns to client's FB Pages using Scheduler	24 hrs	$1,560.00	24 hrs	Fri 6/26/20	Tue 6/30/20		Senior Developer
27	0%	Notifications - Send alerts to Cli	16 hrs	$1,040.00	16 hrs	Wed 7/1/20	Thu 7/2/20		Senior Developer
28	**0%**	**Dashboard**	**40 hrs**	**$2,600.00**	**40 hrs**	**Fri 7/3/20**	**Thu 7/9/20**		
29	0%	Summary - Post Success failures / Facebook posts that fail (count only)	8 hrs	$520.00	8 hrs	Fri 7/3/20	Fri 7/3/20		Senior Developer

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30	0%	Summary - Daily posts (Pie and/or Bar chart)	8 hrs	$520.00	8 hrs	Mon 7/6/20	Mon 7/6/20		Senior Developer
31	0%	Summary - Reach for all posts in last x days (Pie and/or Bar	8 hrs	$520.00	8 hrs	Tue 7/7/20	Tue 7/7/20		Senior Developer
32	0%	New Client Signup - Show list of new clients	8 hrs	$520.00	8 hrs	Wed 7/8/20	Wed 7/8/20		Senior Developer
33	0%	Summary for all Clients effectieveness of engagement (BY ALL CLIENTS - ANALYTICS	8 hrs	$520.00	8 hrs	Thu 7/9/20	Thu 7/9/20		Senior Developer
34	**0%**	**Client Management**	**56 hrs**	**$3,640.00**	**56 hrs**	**Fri 7/10/20**	**Mon 7/20/20**		
35	0%	Maintain access to social media	8 hrs	$520.00	8 hrs	Fri 7/10/20	Fri 7/10/20		Senior Developer
36	0%	UI to Group Clients for Campaign Use	40 hrs	$2,600.00	40 hrs	Mon 7/13/20	Fri 7/17/20		Senior Developer
37	0%	New Client Signup - Initial Setup - assign to group, email system welcome, initial test FB	8 hrs	$520.00	8 hrs	Mon 7/20/20	Mon 7/20/20		Senior Developer
38	**0%**	**"PLUGIN"**	**40 hrs**	**$2,600.00**	**40 hrs**	**Tue 7/21/20**	**Mon 7/27/20**	**This is functionality**	
39	0%	Create DB structure to manage and save assets (images, text, etc)	24 hrs	$1,560.00	24 hrs	Tue 7/21/20	Thu 7/23/20		Senior Developer
40	0%	Create and name campaign. Save status Posted / Not-Posted	8 hrs	$520.00	8 hrs	Fri 7/24/20	Fri 7/24/20		Senior Developer
41	0%	Share Dropbox Link type	8 hrs	$520.00	8 hrs	Mon 7/27/20	Mon 7/27/20		Senior Developer
42	**0%**	**ANALYTICS**	**18 hrs**	**$1,170.00**	**18 hrs**	**Tue 7/28/20**	**Thu 7/30/20**		
43	0%	Get likes from Client facebook link	8 hrs	$520.00	8 hrs	Tue 7/28/20	Tue 7/28/20		Senior Developer

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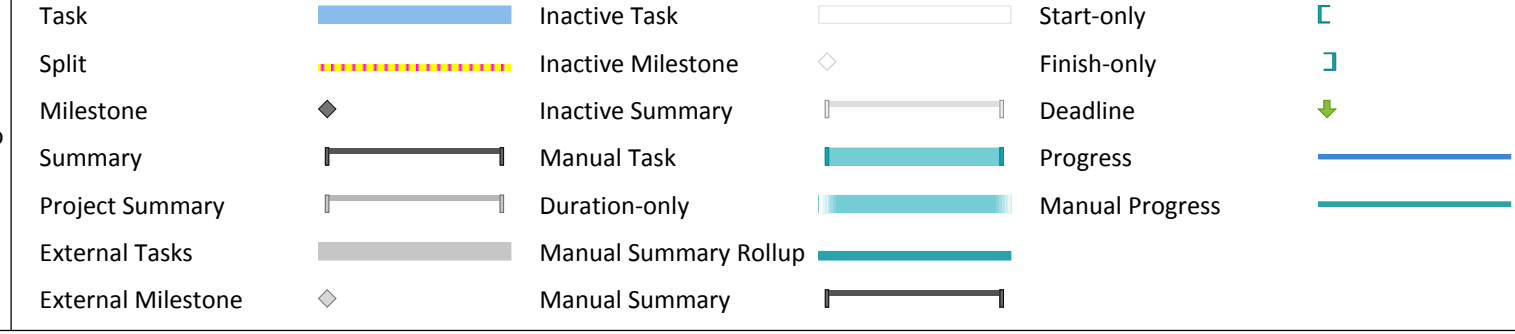

ID	% Comple	Task Name	Work	Cost	Duration	Start	Finish	Notes	Resource Names
44	0%	Get impressions from Client facebook links	2 hrs	$130.00	2 hrs	Wed 7/29/20	Wed 7/29/20		Senior Developer
45	0%	Summarize for all Clients effectieveness of engagement (BY SINGLE CLIENT)	8 hrs	$520.00	8 hrs	Wed 7/29/20	Thu 7/30/20		Senior Developer
46	**0%**	**SYSTEM PROCESSES**	**28 hrs**	**$1,820.00**	**28 hrs**	**Thu 7/30/20**	**Tue 8/4/20**		
47	0%	Update Analytics daily (for each FB connection)	20 hrs	$1,300.00	20 hrs	Thu 7/30/20	Mon 8/3/20		Senior Developer
48	0%	Post Content based on schedule (reuse post code)	4 hrs	$260.00	4 hrs	Mon 8/3/20	Tue 8/4/20		Senior Developer
49	0%	Send Notifications to clients of posted content	4 hrs	$260.00	4 hrs	Tue 8/4/20	Tue 8/4/20		Senior Developer
50	**0%**	**MAIL SERVICE**	**8 hrs**	**$520.00**	**8 hrs**	**Tue 8/4/20**	**Wed 8/5/20**		
51	0%	Mail Service Setup	8 hrs	$520.00	8 hrs	Tue 8/4/20	Wed 8/5/20		Senior Developer
52	**0%**	**Part 3: Testing, Stabilization & Bugfixing**	**102 hrs**	**$6,630.00**	**102 hrs**	**Wed 8/5/20**	**Mon 8/24/20**		
53	**0%**	**Testing (25% of dev task)**	**92 hrs**	**$5,980.00**	**92 hrs**	**Wed 8/5/20**	**Fri 8/21/20**		
54	0%	Client User	24 hrs	$1,560.00	24 hrs	Wed 8/5/20	Mon 8/10/20		Senior Developer
55	0%	Admin User	44 hrs	$2,860.00	44 hrs	Mon 8/10/20	Tue 8/18/20		Senior Developer
56	0%	Plugin	10 hrs	$650.00	10 hrs	Tue 8/18/20	Wed 8/19/20		Senior Developer
57	0%	Analytics	5 hrs	$325.00	5 hrs	Wed 8/19/20	Thu 8/20/20		Senior Developer
58	0%	System Processes	7 hrs	$455.00	7 hrs	Thu 8/20/20	Thu 8/20/20		Senior Developer
59	0%	Mail Service	2 hrs	$130.00	2 hrs	Fri 8/21/20	Fri 8/21/20		Senior Developer
60	0%	Bugfixing (10%)	10 hrs	$650.00	10 hrs	Fri 8/21/20	Mon 8/24/20		Senior Developer
61	**0%**	**Part 4: Training, Knowledge Transfer & Deployment**	**24 hrs**	**$1,560.00**	**24 hrs**	**Mon 8/24/20**	**Thu 8/27/20**		

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63	0%	Production Environment Setup	16 hrs	$1,040.00	16 hrs	Mon 8/24/20	Wed 8/26/20		Senior Developer
64	0%	Deployment to Production	4 hrs	$260.00	4 hrs	Wed 8/26/20	Wed 8/26/20		Senior Developer
65	0%	Documentation	4 hrs	$260.00	4 hrs	Thu 8/27/20	Thu 8/27/20		Senior Developer
66	0%	Project Management	56 hrs	$3,640.00	56 hrs	Tue 6/2/20	Wed 6/10/20		Project Manager

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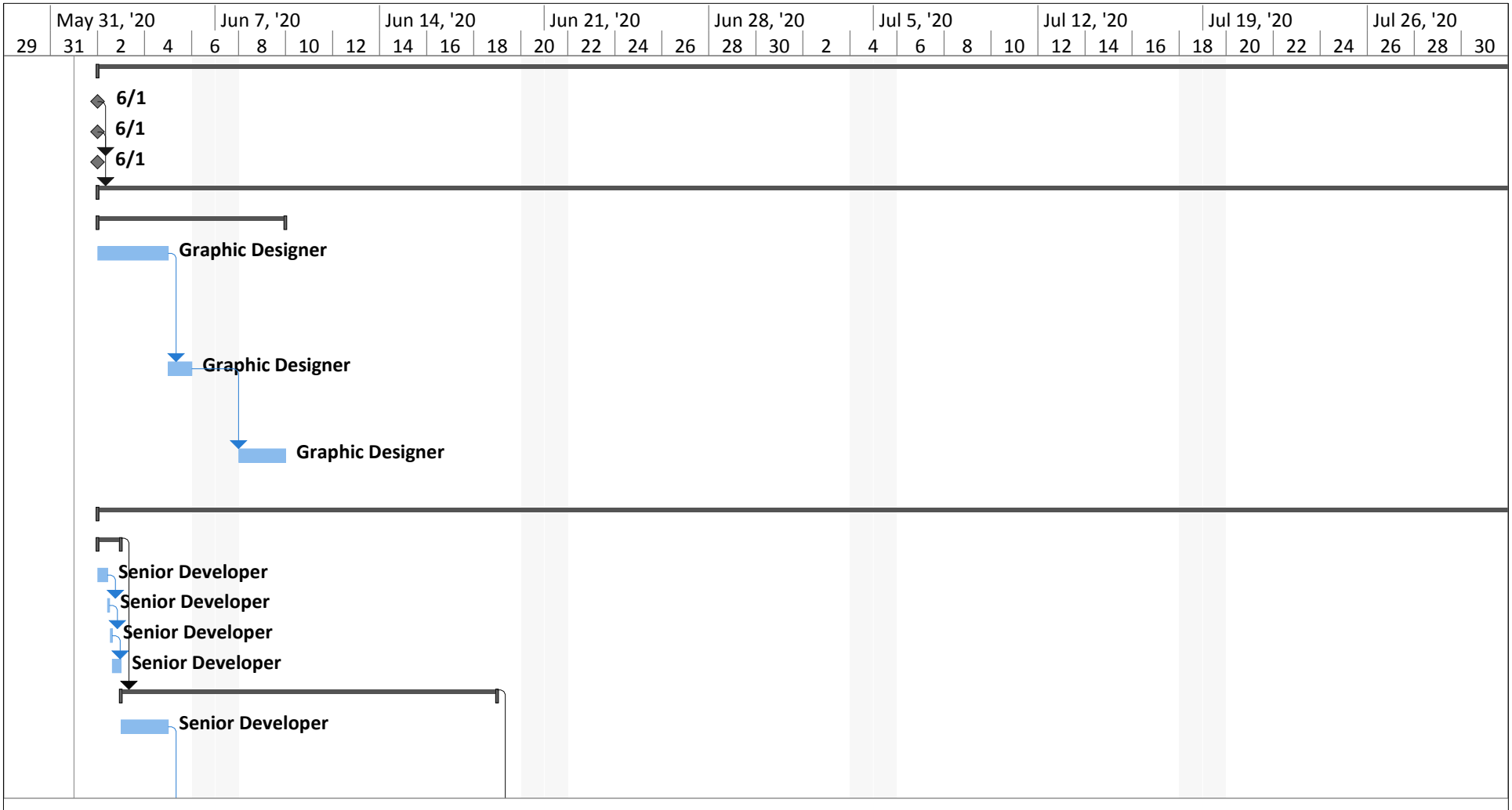

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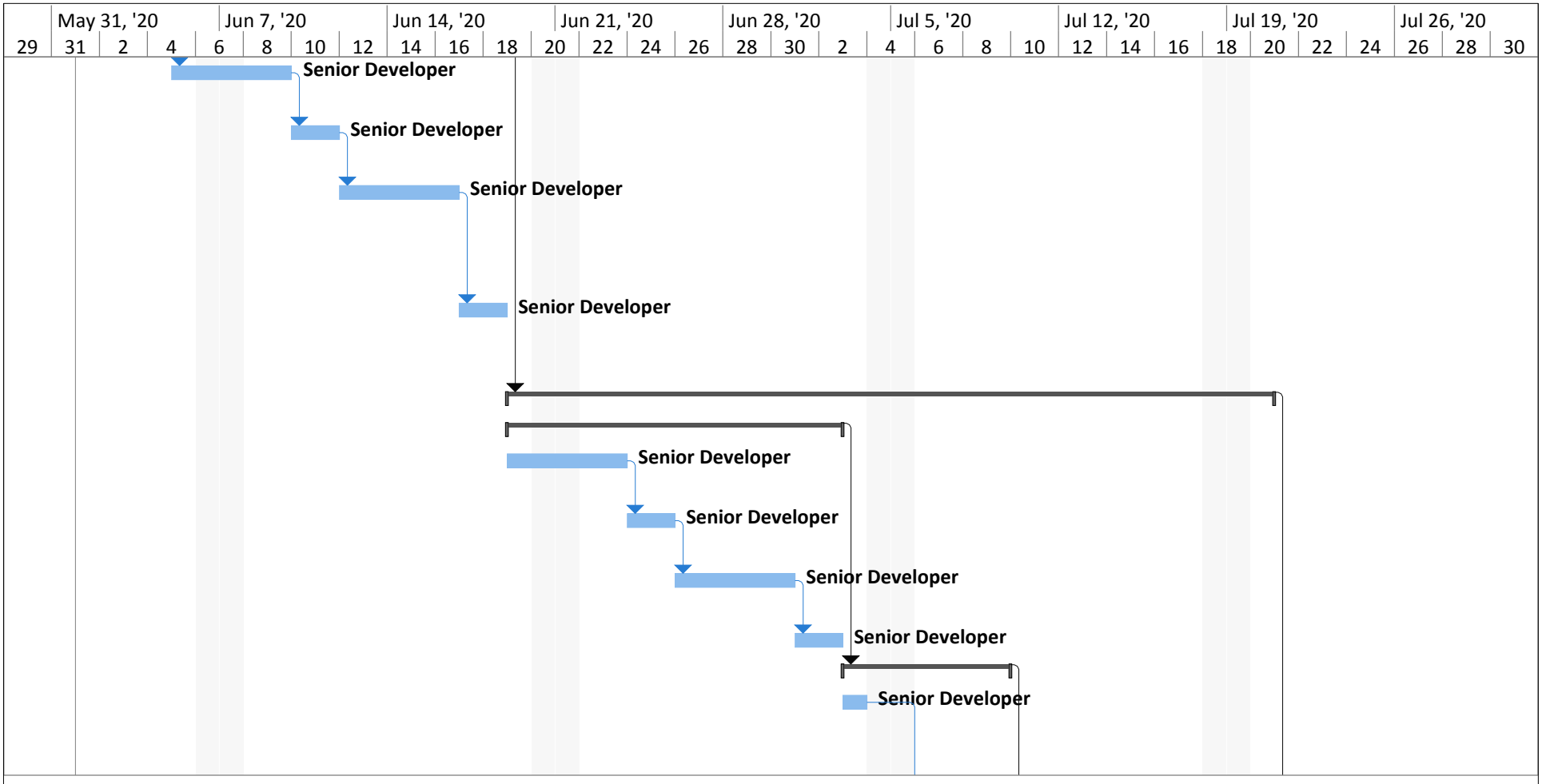

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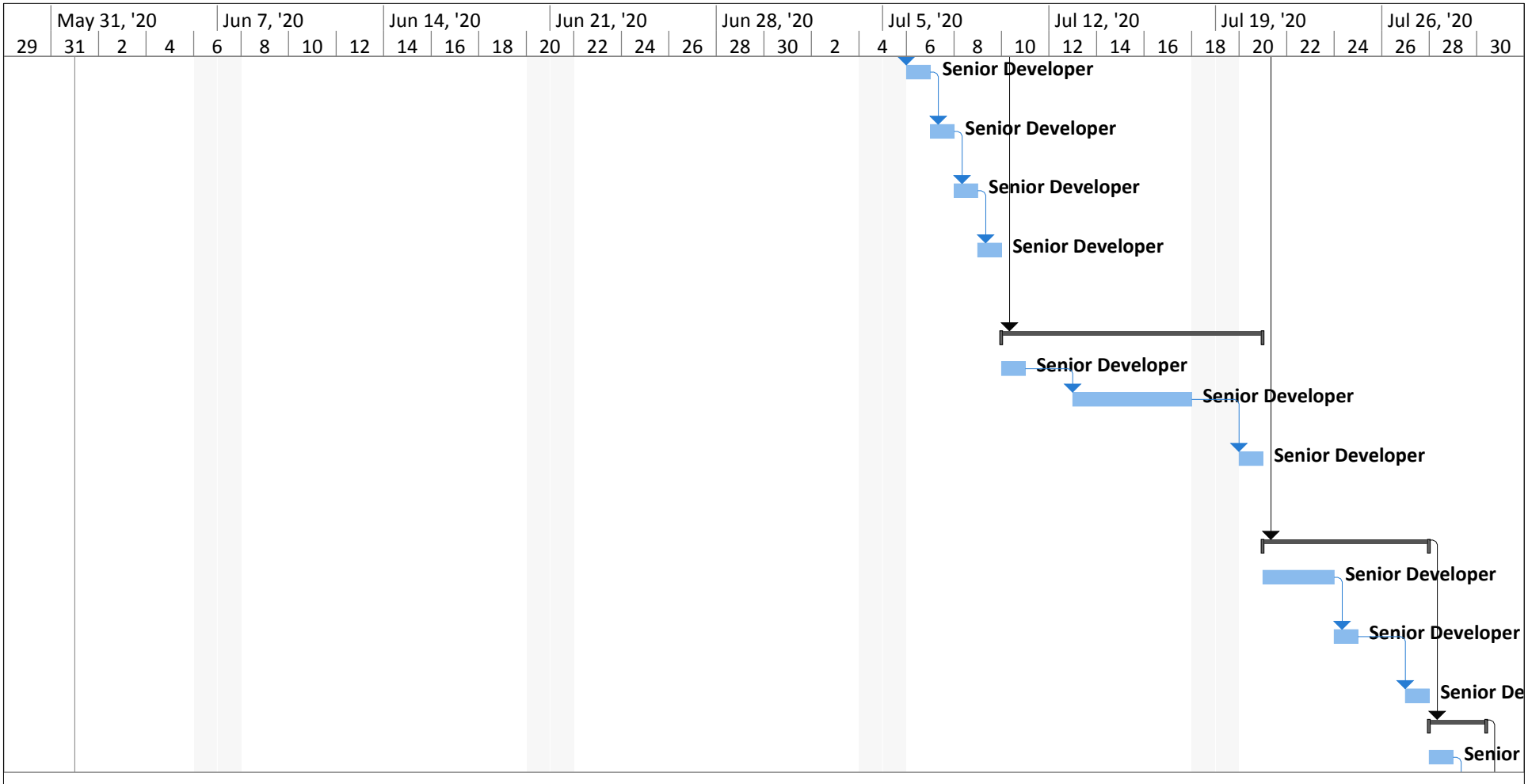

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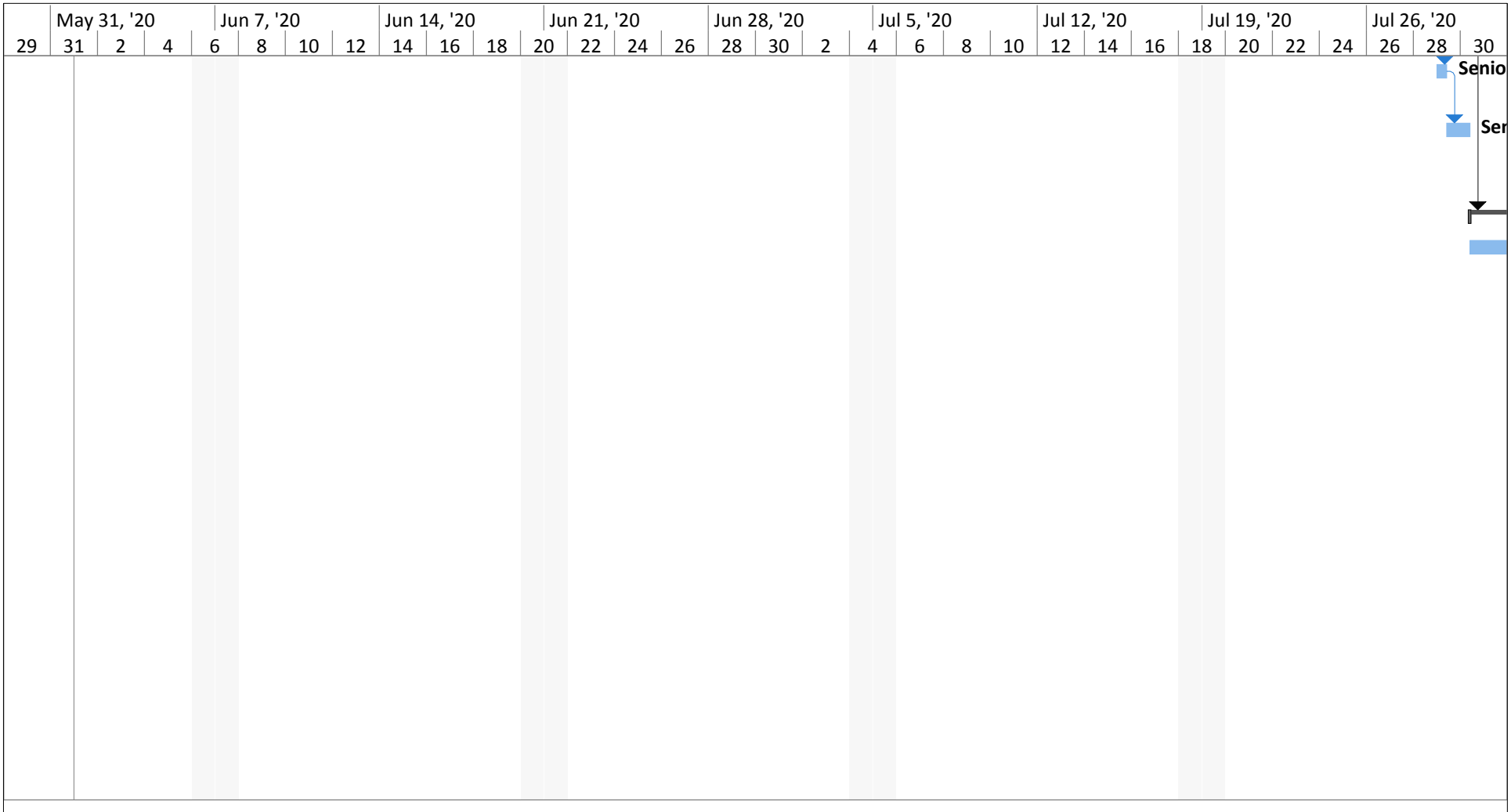

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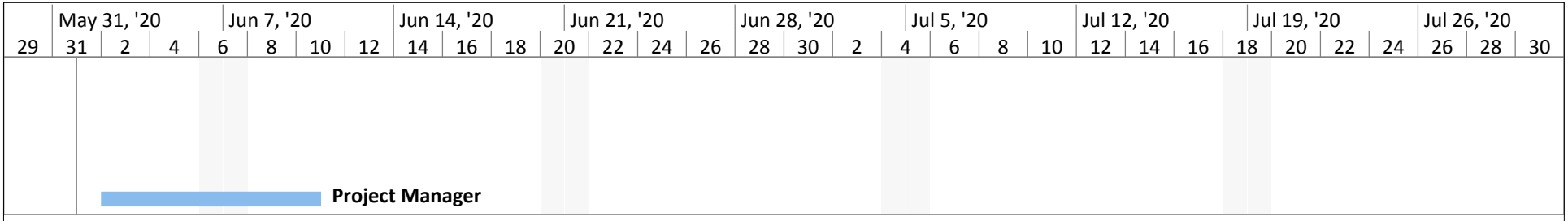

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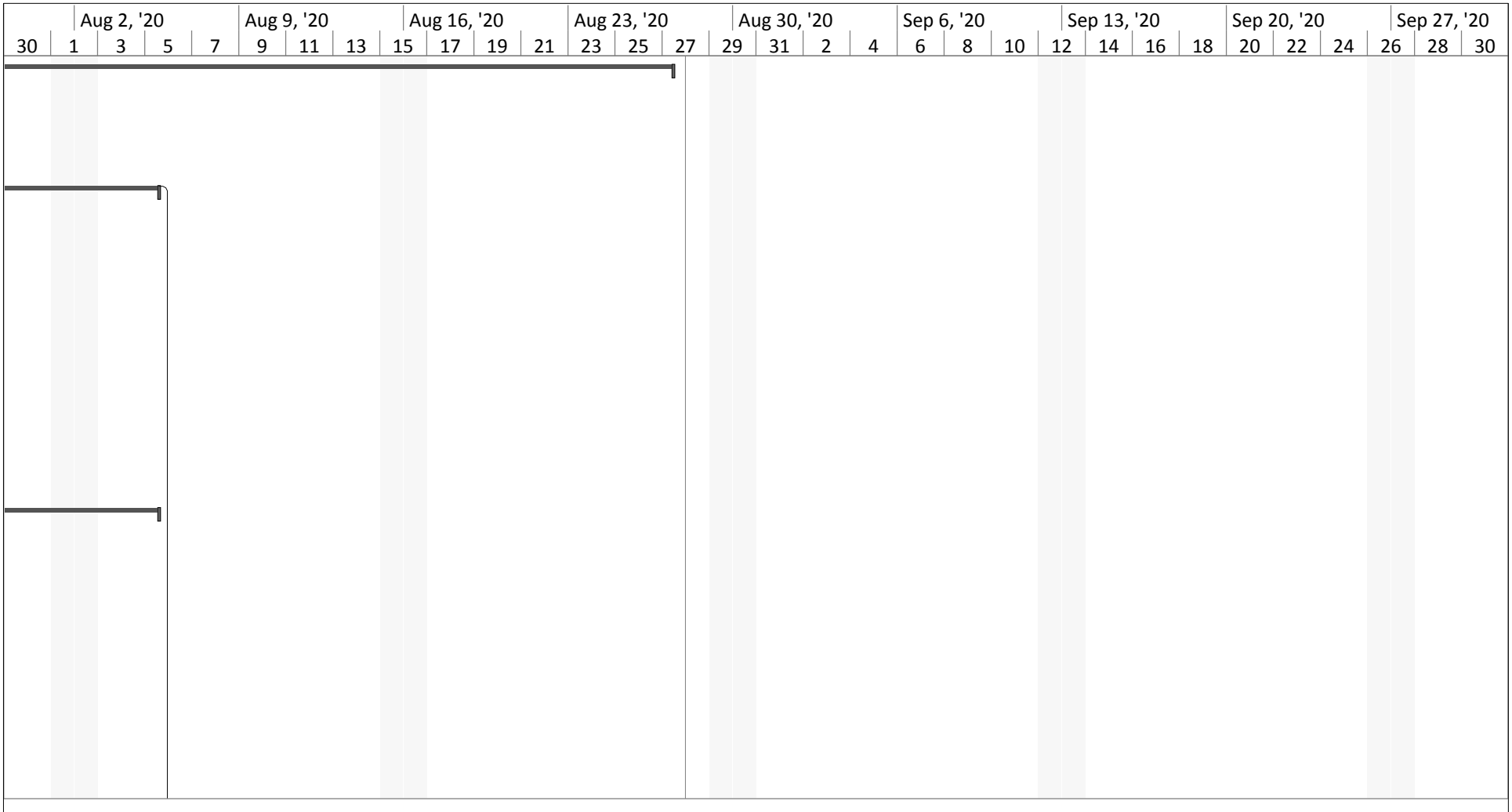
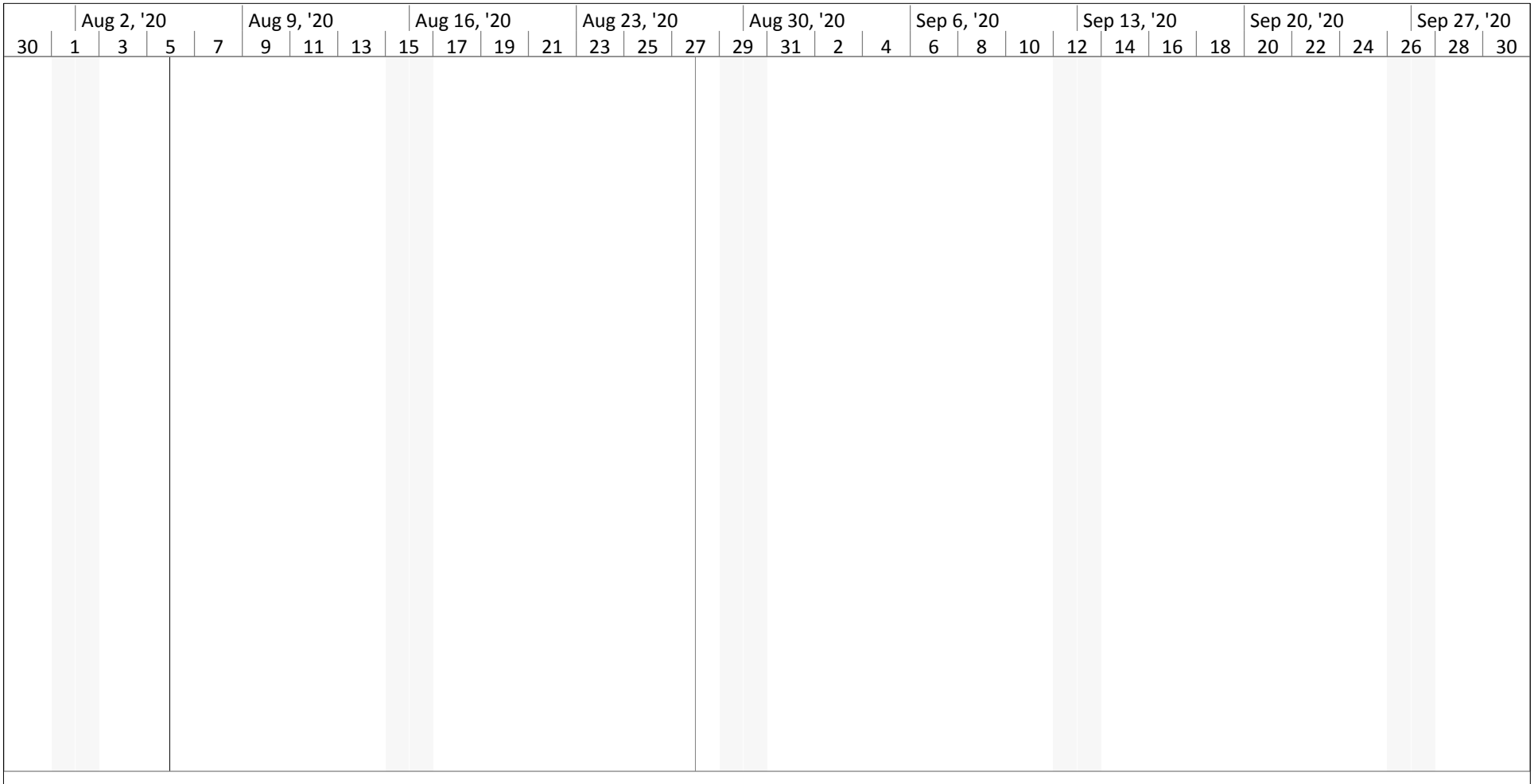
External Tasks		Manual Summary Rollup			
External Milestone		Manual Summary			



Project: NC Chiropractic Assn-Hoo
Date: Mon 5/11/20

Task		Inactive Task		Start-only	
Split		Inactive Milestone		Finish-only	
Milestone		Inactive Summary		Deadline	
Summary		Manual Task		Progress	
Project Summary		Duration-only		Manual Progress	
External Tasks		Manual Summary Rollup			
External Milestone		Manual Summary			



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Task		Inactive Task		Start-only	
Split		Inactive Milestone		Finish-only	
Milestone		Inactive Summary		Deadline	
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Project Summary		Duration-only		Manual Progress	
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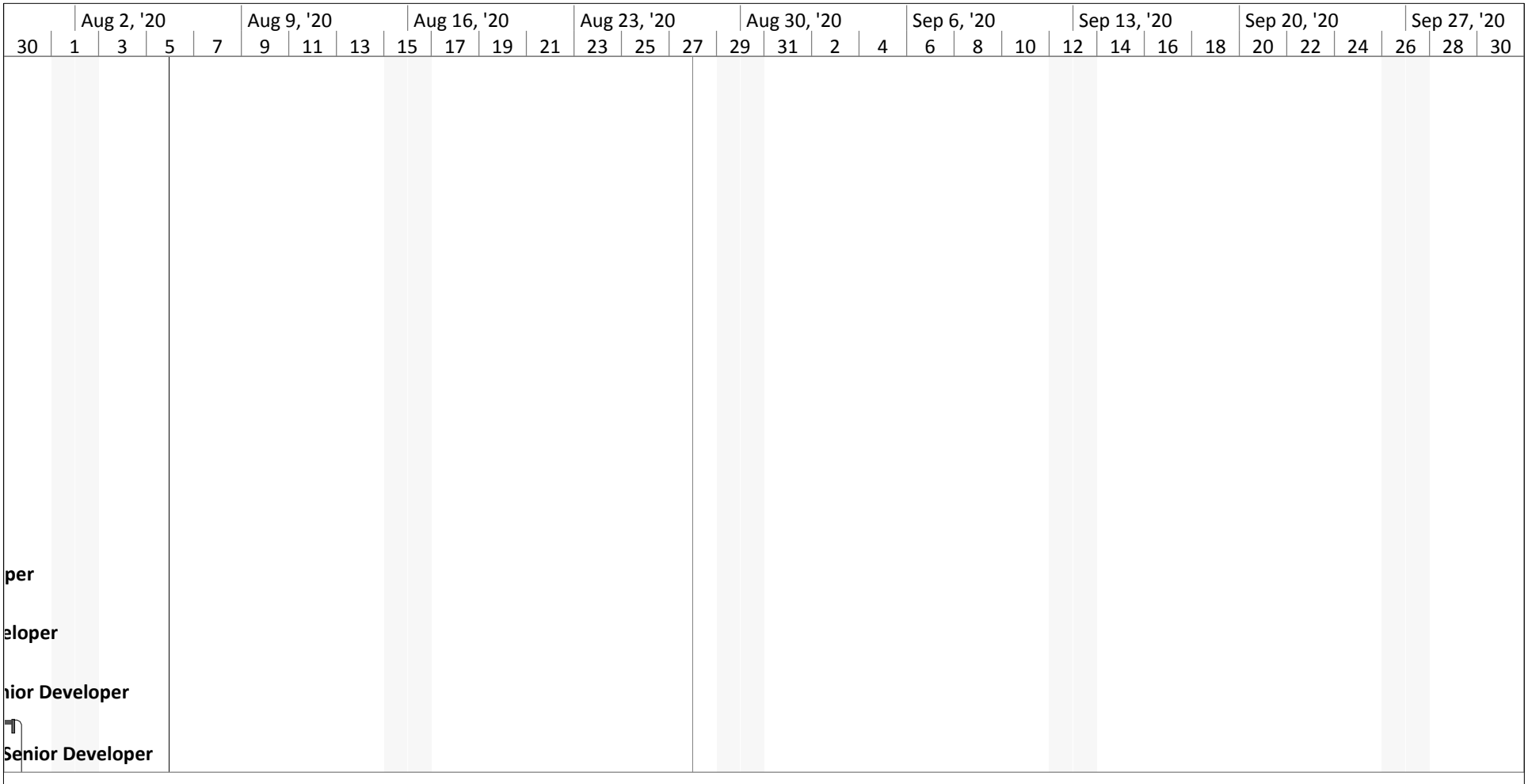

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Project Summary		Duration-only		Manual Progress	
External Tasks		Manual Summary Rollup			
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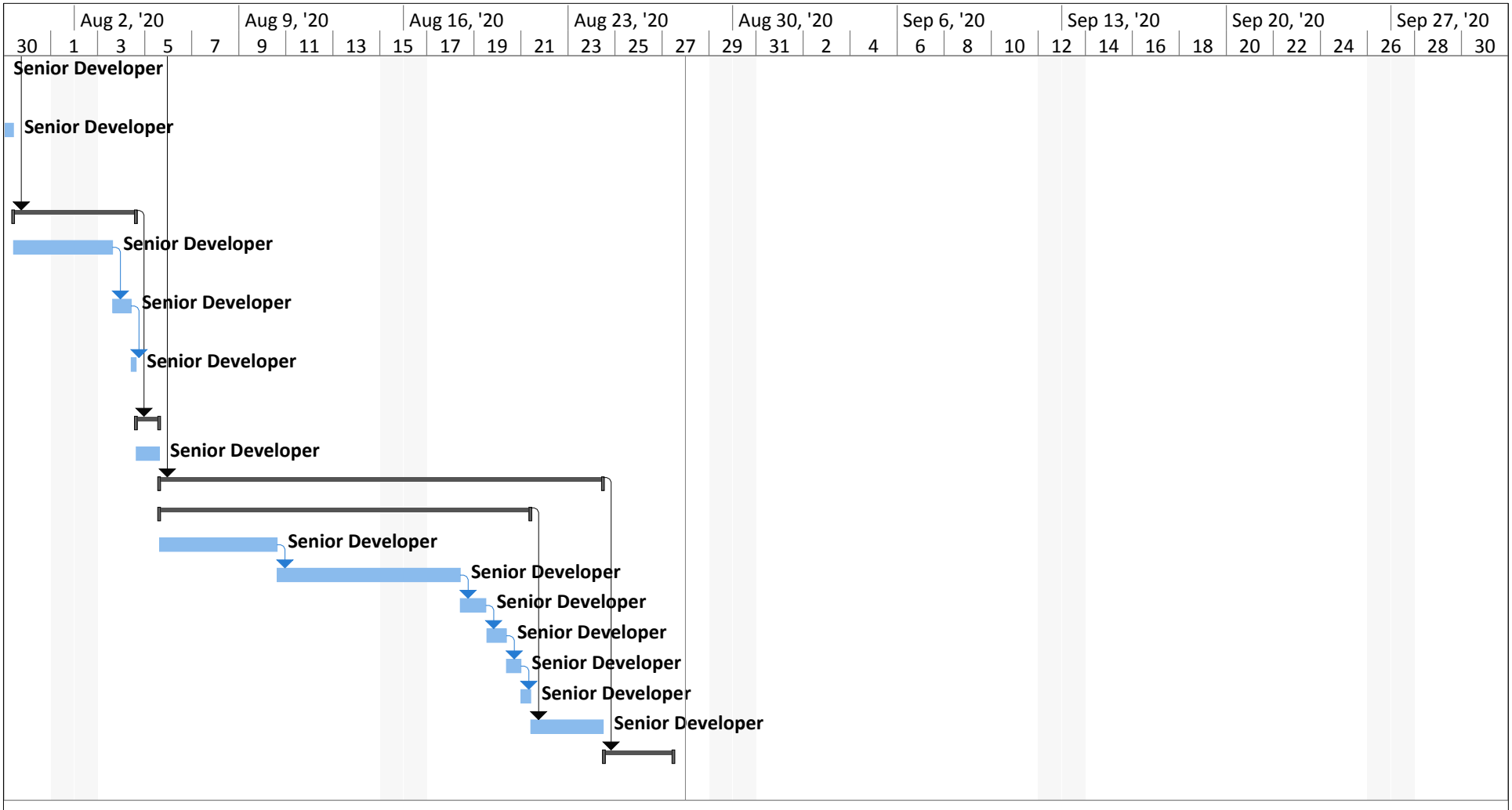

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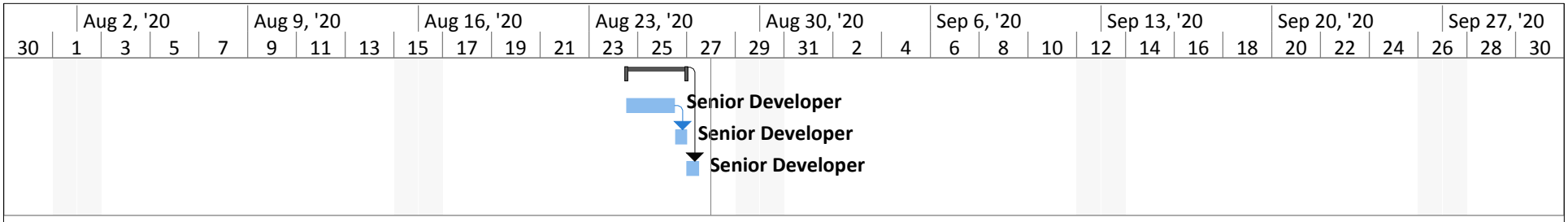

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