Project Plan Criteria

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I hereby declare that I did not plagiarise the content of this assignment and that this is my own work.

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Table of Contents

1 Project Scope 1
1.1 Project Goal and Objectives 1
1.2 Project Boundaries 1
1.3 Project Deliverables and Success Criteria 1
1.4 Project Assumptions 3
1.5 Project Risks 3
1.6 Project Constraints 3
2 Technical and Economic feasibility study 3
2.1 Executive summary 3
2.2 Description of project 3
2.3 Analysis of competitive landscape 4
2.3.1 SWOT Analysis 4
2.4 Technical feasibility 5
2.5 Economic Feasibility 8
3 Work breakdown structure 1
4 Project Milestones 2
5 Project Plan 3
6 Reference List 1

1 PROJECT SCOPE

UVIWE Project Scope

1.1 Project Goal and Objectives

The Uviwe Mobile App will deliver record keeping improvements so that the organization can store, record, and update their data efficiently. The project will take advantage of the software and technology available.

- Paper-based recording and storing of information is digitized.
- Mobile app to run on all android versions.
- Improve accuracy by 80%.
- Financial recording procedures increased by 65%.
- Reduce procedural errors by 50%.

1.2 Project Boundaries

Within Scope:

- Redesign processes for recording, storing and updating financial and attendance records.
- Deliver new fundraising procedures and functions.
- Document processes and system use
- Train staff on processes and system

Out of scope:

- Increase in the number of deliverables.
- Managing inventory
- Adding new plugins, software or functionality not already included.

1.3 Project Deliverables and Success Criteria

The following are the deliverables and success criteria for the Uviwe mobile app project:

End Deliverables	Success Criteria

New learners' attendance tracking system	Uviwe staff are using the new process and system to track learners' attendance
New financial transactions recording system	Uviwe staff can use the system for recording and tracking financial transactions
Fundraising system functionality	Uviwe staff can create fundraising procedures and ideas
Service statistics report	Uviwe staff/administrators can get a report (2 months after launch) showing app usage and performance

Intermediate Deliverables	Success Criteria
System specification approved	Specification presented to stakeholders and approved
Business process analysis complete	Analysis completed and documented for all app functionality
System design/configuration plan	Completed plan outlines the setup and configuration of the Uviwe app cross-referenced to requirements
Server configured	Server is configured according to plan, software is installed, and Uviwe app is running
App database loaded	All staff, facilities, and equipment uploaded to app database. Testing shows 100% accuracy
Devices setup	User devices are installed and configured and can access the new Uviwe app
Training complete	All staff have completed training on new processes and system

Overall deliverables:

- New record keeping system and processes launched.
- Process and system documentation
- Service statistics report on recorded data

Overall success criteria

- Staff are using the new processes and system to record or update procedures Manuals on mobile app with the new system are printed and available.
- Report (1 Month after launch)

1.4 Project Assumptions

- The organization is responsible for installation, configuration, and loading data so the system is ready for operation.
- The organization provides training for all staff.
- The mobile app doesn’t require any customization.

1.5 Project Risks

- The IT group doesn’t have enough resources to implement the new system.
- Success criteria for several project objectives can’t be confirmed until several months after the processes and system are operational.
- The system requires extensive customization to deliver some requirements.
- Violation of confidentiality agreement and legal risks

1.6 Project Constraints

- Limited budget on development resources
- Project execution complete by 2023.

2 TECHNICAL AND ECONOMIC FEASIBILITY STUDY

2.1 Executive summary

We will be assessing the factors that contribute to the Technical and Economic feasibility of the project. We will breakdown the aspects that influence the technical and Economic feasibility of this project’s creation. This document will breakdown the ‘description of the project’, it will give an ‘analysis of the competitive landscape’, the ‘operating requirements’ will be defined, ‘financial projections’ will be presented and the ‘recommendations and findings’ will be given.

2.2 Description of project

We have been tasked with creating and Android App that will be able to help ‘Uviwe’ keep track of their data. This will be and Android App that is available to all staff members, so that they can carry out work related tasks.

The program must be able to:

- Record the Attendance of a student and the school centre they are in.
- Record The Finances of a fee and its payer.
- Record a Donation amount and its donator's name.

The Team:

- Romeo Vlooh,
- Chad Andrews
- Zwanga Muthavhine

2.3 Analysis of competitive landscape

The competitive market out there includes most software development companies that occupy the 'Web Design 'and 'Android App' field, these are our main competitors, other software developers. The team must be able to provide a program that is capable of competing with all the features and functions that can be found in most Android App, the team will have to study these examples to better inform their development.

2.3.1 SWOT Analysis

Strengths:

- The project requirements are straight forward.
- All the requirements are within the group's capabilities.
- All necessary programs and tools are already available for individual/group use.

Weaknesses:

- The project will have to completed by only three IT students.
- Time is very limited for this project cycle.
- The Team will have to meetup routinely to complete estimated goal posts.

Opportunities:

- The 'Uviwe' NGO is willing to meet online, so work can be revised more quickly than in person.
- The 'Uviwe' NGO is willing to supply us with any information we may need.
- The NGO already has a website, this can be used as a template for how to create the Android App.

Threats:

- Loadshedding can cause a hiatus in progress until power returns.
- External data failure.
- Scope creep.

2.4 Technical feasibility

This evaluates the technical complexity of the expert system and involves determining whether the system can be implemented with state-of-the-art techniques and tools available.

The Technological Factors

(Front-end)

- The application must be able to run on an Android phone.
- The application functions involve a few pages, for three distinct program functions:

1. Attendance Report: This is a page used to record data (Name and School Centre) relating to a student's attendance to a school centre associated with Uviwe. This can be implemented reliability with the current tool set, information on hand and abilities.

2. Finance Report: This is a page used to record data (Name and Amount) relating to whether a fee has been paid and by who. This can be implemented reliability with the current tool set, information on hand and abilities.

3. Donation Report: This is a page used to record data (Name and Amount) relating to the person donating as well as their amount donated. This can be implemented reliability with the current tool set, information on hand and abilities.

- The application must be able to store all entered data so that any staff using the application will be able to use it.

(Back-end)

Azure vs Firebase – Which is best for the project?

We will be looking at which of the two hosting services will work best for our project, by looking at the features and pricing of both to understand which is best for us. Firstly, going over Azure and then Firebase.

Azure Overview

Azure provides cloud services for users to build, manage, test, and deploy applications. It also offers clear forms of cloud computing services, platform as a service, infrastructure as a service and software as a service as well as other serverless services.

Azure Features

- Infrastructure as a Service – It allows customers to deploy and manage applications quickly and easier; and Azure also makes it possible for customers to customise software to meet their requirements.
- Strong Support in Analytics – It is equipped with built in support for analysing data and key insights. This includes features such as Cortana Analytics, Stream Analytics, Machine Learning, and SQL services.
- Enhanced IT Support – It can be easier integrated into the existing IT department, this is performed through hybrid databases, storage solution, and secure private connections.
- Improved scalability – Azure is a pay as you go service so the capacity can be adjusted to suit the needs of the customer anytime.

Pricing

- Pay as you go - It is calculated by the actual usage and is billed per second. No upfront payment and long-term commitments.

Pros	Cons
Security	Complexity
Flexibility	Support
High Availability and Uptime	Complicated Pricing
Scalability	Data Transfer fees

Firebase Overview

Firebase helps developers create, manage and their apps easily; and apps can be created faster in a secure manner with the Firebase. It provides services to IOS, Android, unity, and the web, while making use of NoSQL for database storing.

Firebase Features

- Realtime Database – Cloud hosted NoSQL database that lets you store and sync data between users in real time.

- Authentication – Aims to make building secure authentications easy, while improving the sign-in and onboarding experience for end users.
- Hosting - Build and deploy your websites and apps without managing any infrastructure. Preview, deploy, and roll back with one single command.
- Cloud Functions - Create functions that are triggered by Firebase products, such as changes to data in the Realtime Database, new user sign-ups via Auth, and conversion events in Analytics.
- Cloud Messaging - a reliable and battery-efficient connection between your server and devices that allows you to deliver and receive messages and notifications on iOS, Android, and the web at no cost.
- App Check - is an additional layer of security that helps protect access to your services by attesting that incoming traffic is coming from your app, and blocking traffic that doesn't have valid credentials.

Pricing

- No-Cost (Spark Plan) – Includes most of the features but limited.
- Pay as you go (Blaze Plan) – Includes all the features.

Pros	Cons
Database capabilities	Limited data migration
Free plan	Platform dependence
Quick and easy integration and setup	Android centred
Good documentation	Limited querying capabilities

When to use Firebase

- To share data
- To build simple apps
- To implement real time features
- To deliver faster

When not to use Firebase

- To handle complex queries
- To ensure high data integrity
- To skip idea validation

Conclusion

Looking through the differences between Azure and Firebase, I believe Firebase would be better suited to our project since we will be making an android app and Firebase caters very towards it. Azure have features that would come in handy but things like Authentication and Cloud Messaging on Firebase just make it a better option for our app. Firebase is also a lot more straight forward and easy to understand than Azure, with included documentation a lot more concise. So overall Firebase is the better option for us due to its focus in mobile applications features on small scales.

2.5 Economic Feasibility

The economic benefits:

- By project end, Uviwe will have a functional and free android app for their organizational needs.
- All necessary tools and applications are already purchased on loan from the college, so major expenses are to be anticipated.
- The entire application and its development is free so the NGO is not expected to pay for anything during development.

The economic costs:

- Their will have to be scheduled meetings, which will cost time.
- Server and database costs

The net economic benefits:

- We decide this by summing all benefits and subtracting the sum of all costs of a project.
- The ‘Net economic benefits’ SUM = Benefits - Expenses

  Benefits

  - -A free Android App that handles organization needs.
  - -All tools accounted for.
  - -No major Uviwe expenses for now.

  Expenses

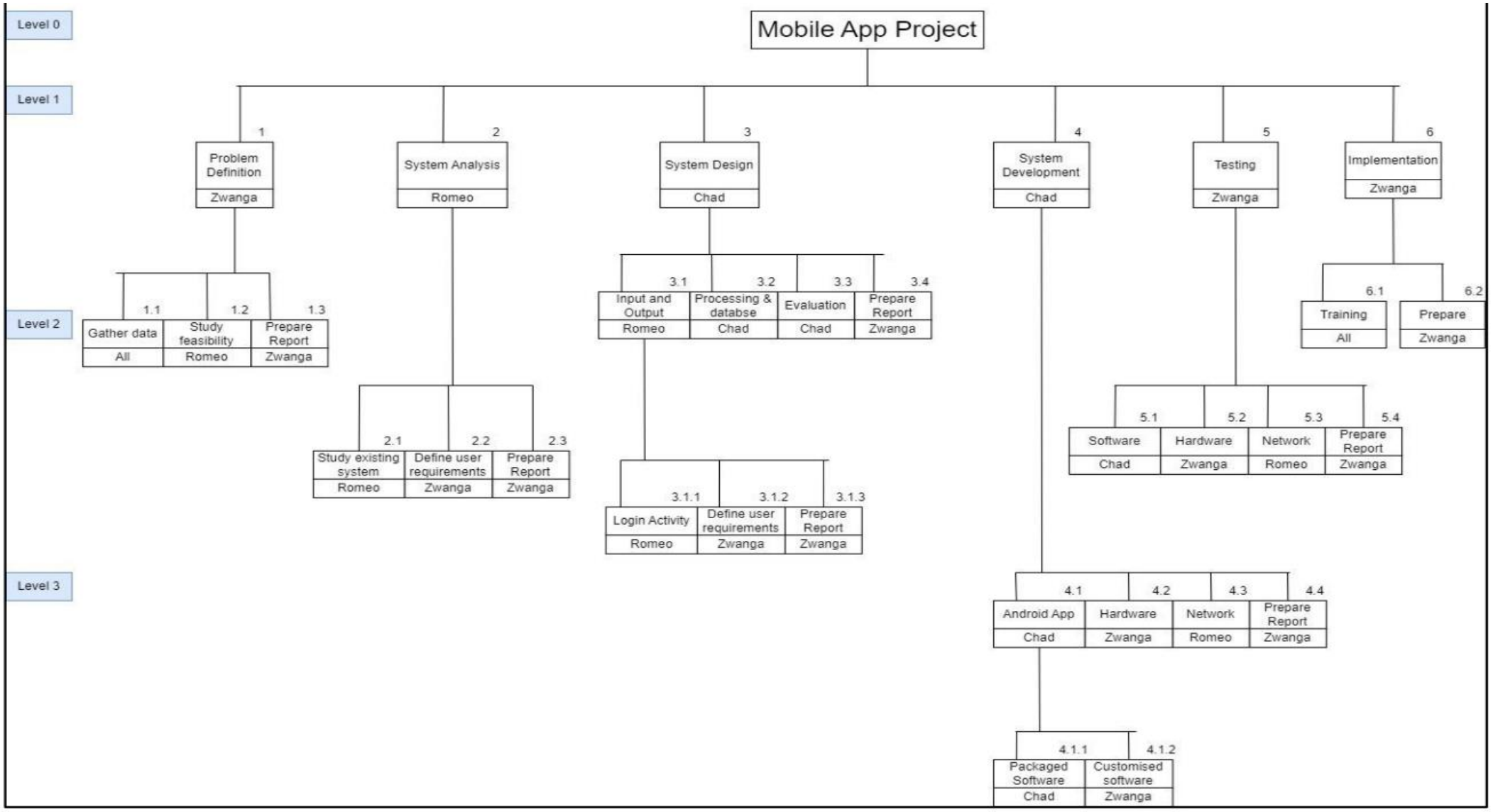
  - Time spent on organizing the project.
  - Server costs

Conclusion

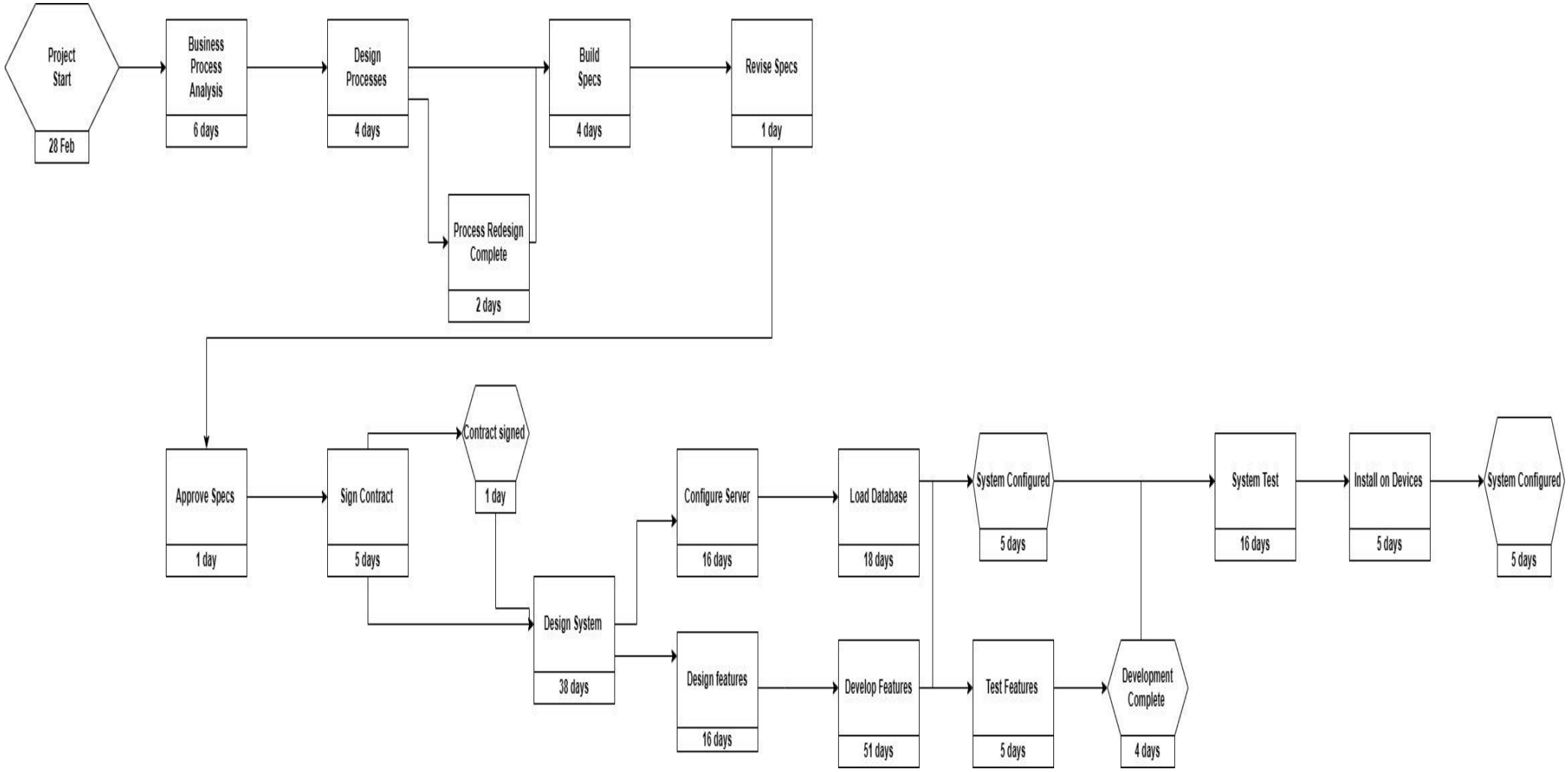
The project to create a mobile app for Uviwe, an NGO, will not have any major expenses as all the necessary applications and data have already been provided. The only expense will be server costs to run the application. The project will not cost Uviwe any of their own capital, making it a net benefit for the organization. The app will have

features such as a new learners' attendance tracking system, financial transactions recording system, fundraising system functionality, and service statistics report. The success criteria for the project includes the implementation of the new process and system to track learners' attendance, the ability for Uviwe staff to record and track financial transactions, the creation of fundraising procedures and ideas, and the ability for staff/administrators to get a report showing app usage and performance. The project will also involve a technical and economic feasibility study to assess the feasibility of the project. Overall, the project is expected to be a net benefit for Uviwe as it will gain a new Android app without having to pay for one.

3 WORK BREAKDOWN STRUCTURE

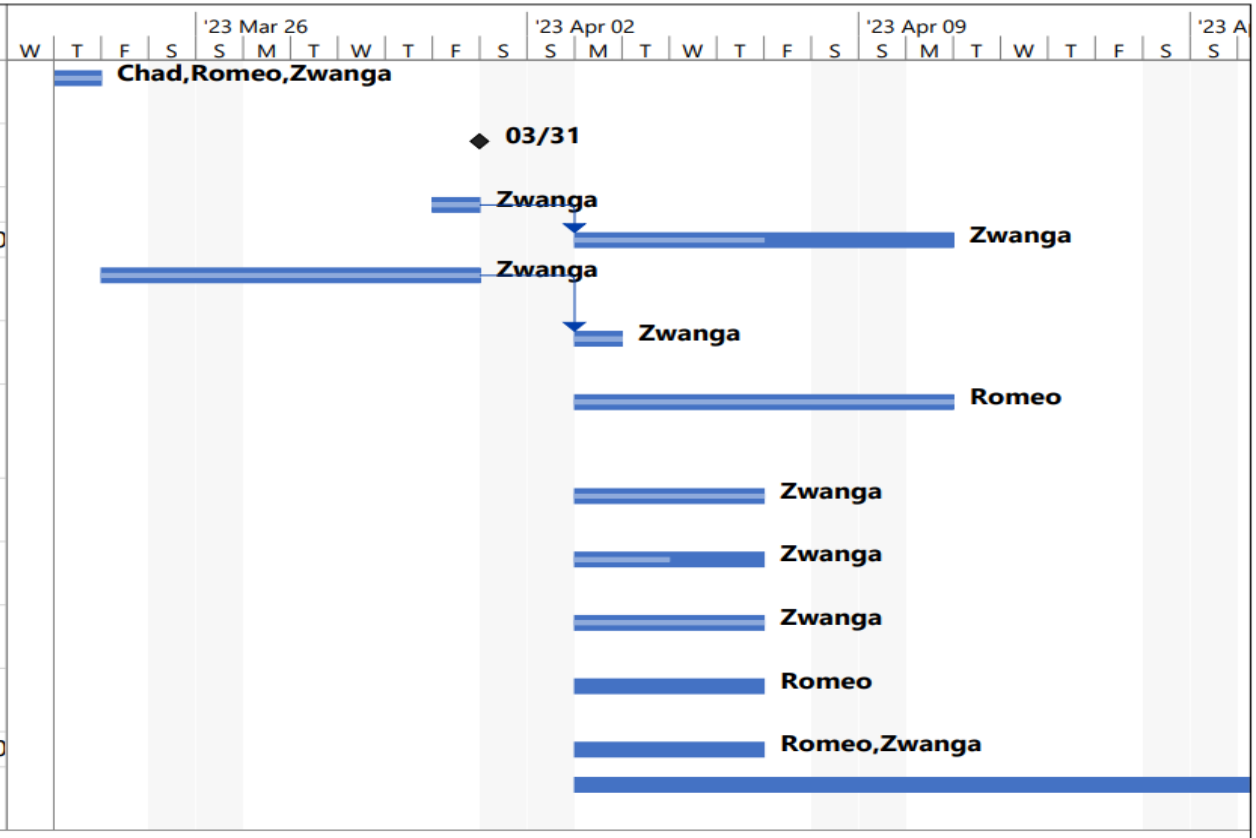


4 PROJECT MILESTONES



5 PROJECT PLAN

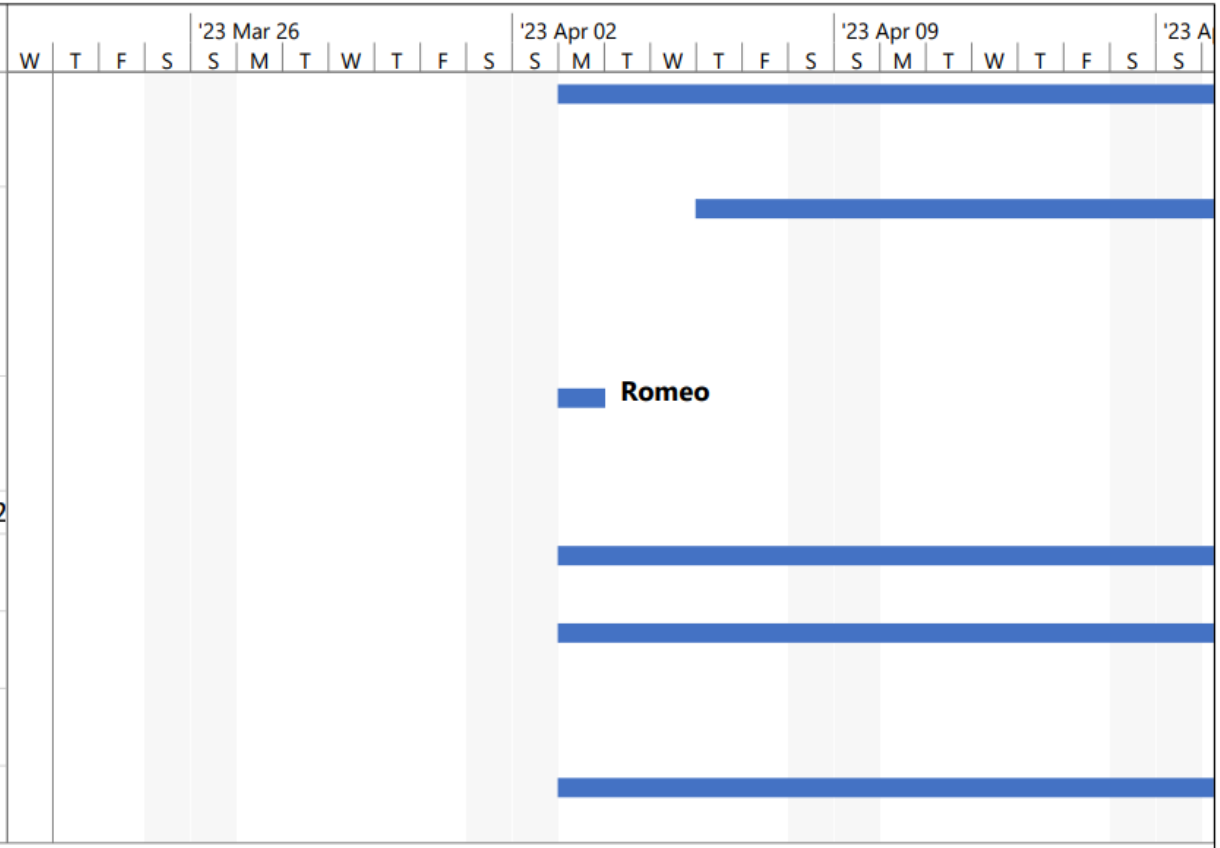
ID	Task Mode	Task Name	Duration	Start
1		Team Member allocation	1 day	Thu 23/03/23
2		Meeting setup with NGO's	0 days	Fri 23/03/31
3		Business Processes	1 day?	Fri 23/03/31
4		System Requirements	6 days	Mon 23/04/0
5		Functions of the system	6 days	Fri 23/03/24
6		Stakeholders and their functions	1 day	Mon 23/04/03
7		Inputs, Outputs and Processing Components	6 days	Mon 23/04/03
8		Scope and key role players	4 days	Mon 23/04/03
9		Milestones and Deliverables	4 days	Mon 23/04/03
10		Work Breakdown Structure	4 days	Mon 23/04/03
11		Technical and economic feasibility	4 days?	Mon 23/04/03
12		Risk Analysis	4 days	Mon 23/04/0
13		Requirement analysis criteria	15 days	Mon 23/04/03



Project: Project1WIL
Date: Sat 23/05/20

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

ID	Task Mode	Task Name	Duration	Start
14		Functional requirement and Use-Case diagram	18 days	Mon 23/04/03
15		Develop a logical system model indicating inputs, outputs, processing and relationships	15 days	Thu 23/04/06
16		Submit business solution requirement and analyisis	1 day	Mon 23/04/03
17		Mid presentation	1 day?	Mon 23/05/2
18		Design and solution criteria	16 days	Mon 23/04/03
19		Design application architecture	16 days	Mon 23/04/03
20		Design the GUI; Database; reports	38 days	Mon 23/05/22
21		Design prototype of android application	51 days	Mon 23/04/03



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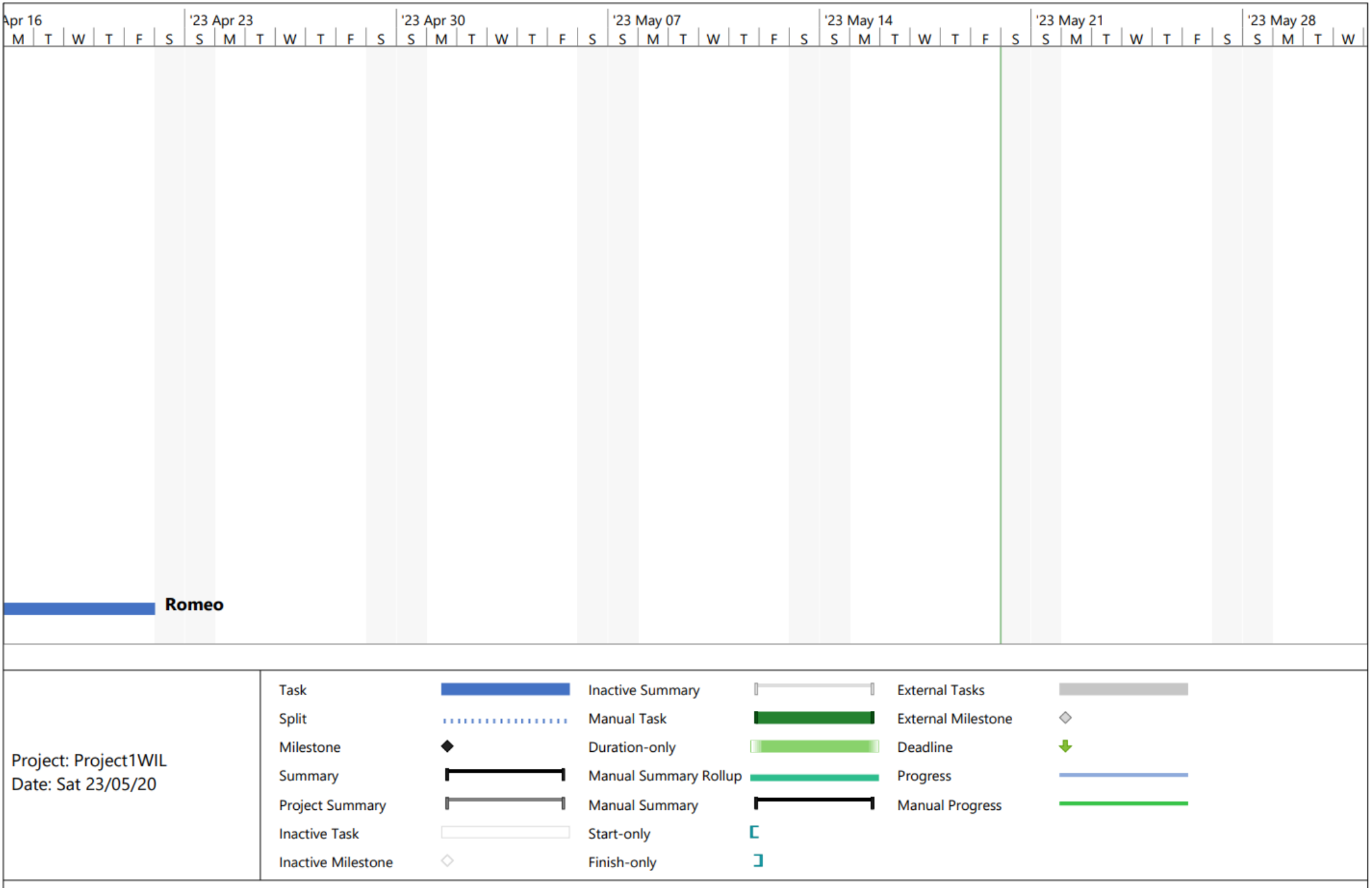
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Project: Project1WIL
Date: Sat 23/05/20
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Summary
Project Summary
Inactive Task
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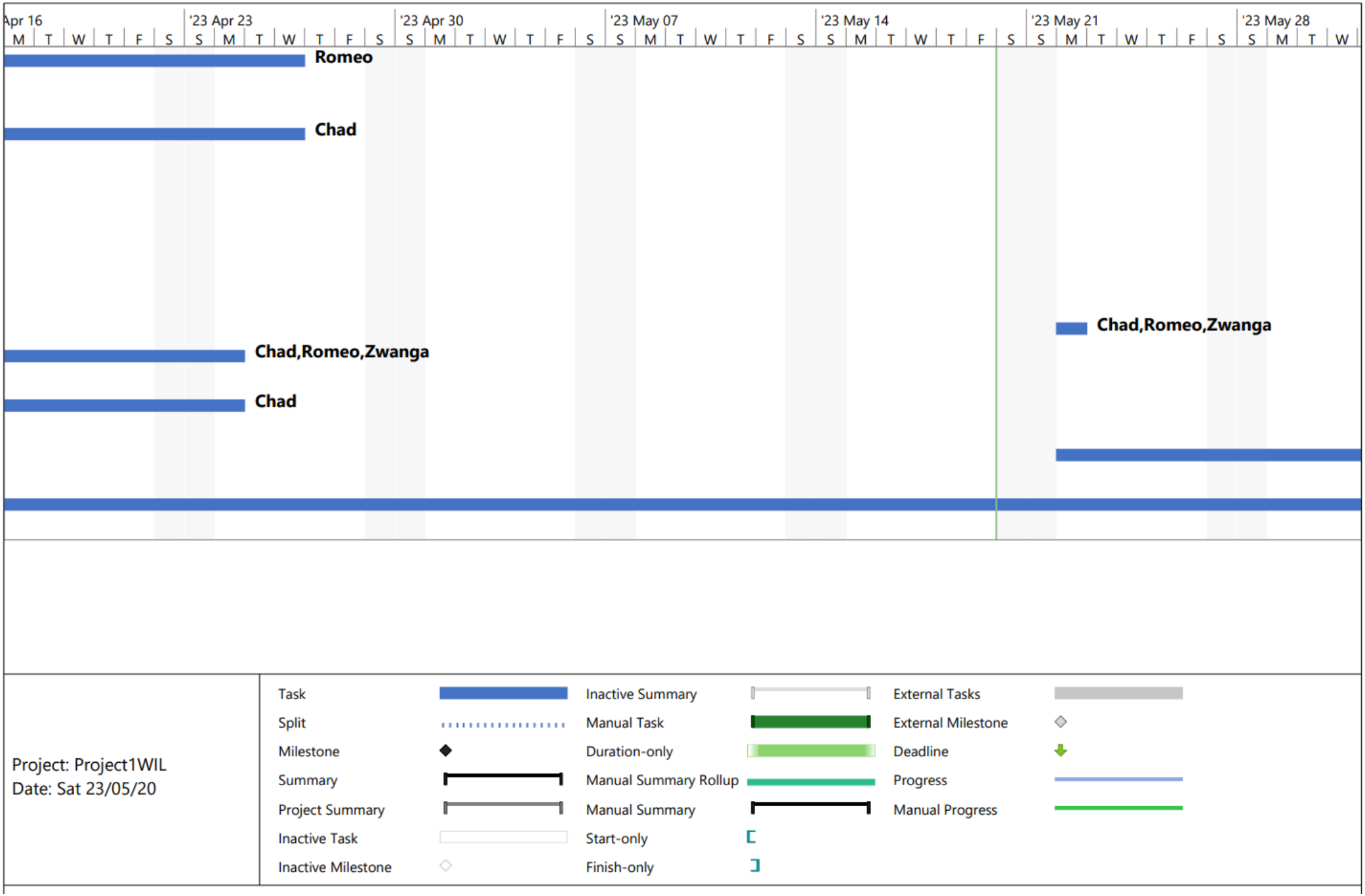
Deadline
Progress
Manual Progress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Romeo
Chad
Chad,Romeo,Zwanga
Chad
Chad,Romeo,Zwanga
Project: Project1WIL
Date: Sat 23/05/20
Task
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Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
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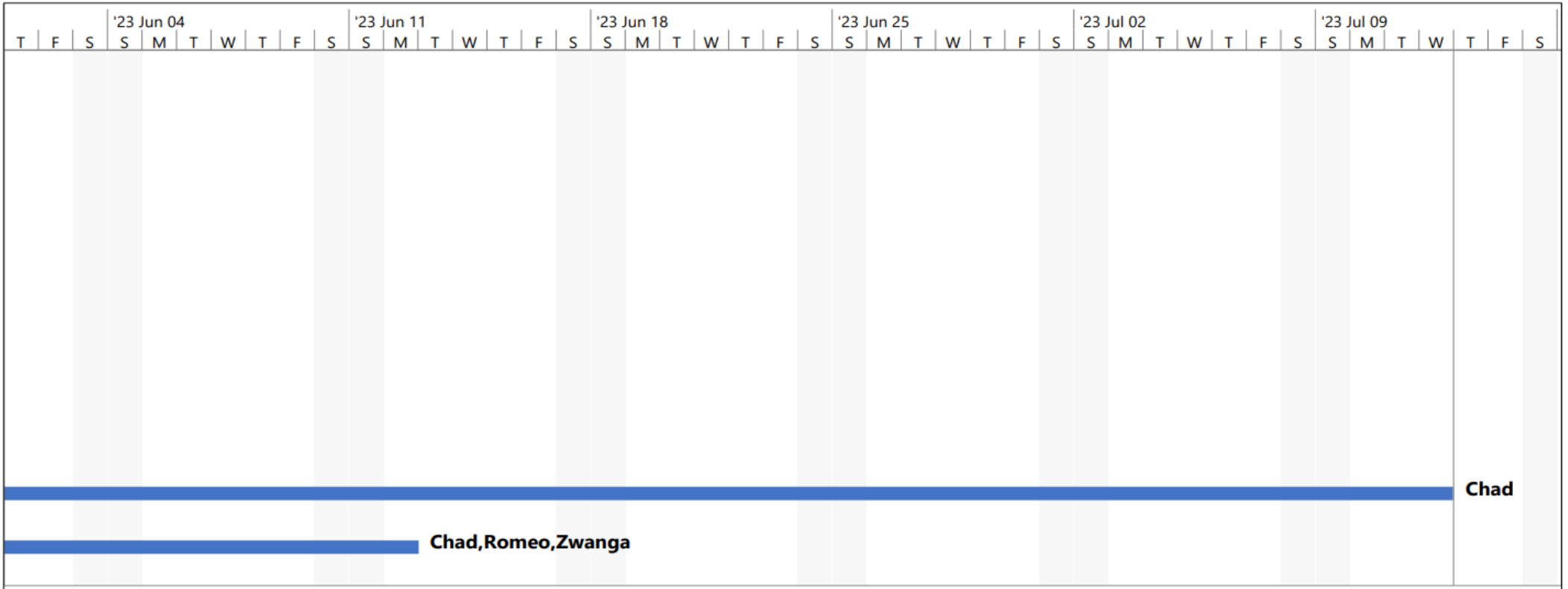

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6 REFERENCE LIST

Gido, J., Clements, J., Baker, R., Harinarian, N. and Eresia-Eke, C. 2022. Successful Project Management in South Africa. 2nd ed. Andover: Cengage Learning.