جامعة أم القرى
UMM AL-QURA UNIVERSITY

كلية الحاسب الآلي ونظم المعلومات

Helping Hand Project Management group project

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1. Introduction

The Helping Hand app is made to offer a variety of human services. By connecting users with our skilled staff, the Helping Hand app seeks to make everyday life easier and more straightforward. Combining human labor and technology allows our users to concentrate on their primary tasks while still having convenience, dependability, and peace of mind.

Our services include an hourly cleaning service that ensures a clean home, gardening services provided by well-trained workers to plant and repair your gardens, an hourly babysitting service that takes care of the child, and a guest serving service that takes the care of your guest starting from serving food to cleaning up after their departure.

Objectives:

- Create a dependable environment that users trust and enjoy.
- Provide accessible services by combining technology and human services.
- Provide users the ability to request services from any category at any time.
- Develop a user-friendly application that offers various types of human support.

2. Stakeholders

1. ***customers***: the primary stakeholders, who uses our application and the main benefit from it, customers usually seek convenience and reliability in finding helping services, their feedback is crucial for the development of the application.

2. ***Service providers***: individuals or organizations who offer the helping hand working crew who offer various household services to the customers, Service providers rely on our application to connect with potential customers and build their reputation on it.

3. ***Application owners***: those who design, implement, and manage the program; they also communicate with service providers and are in charge of ensuring its effectiveness.

4. ***The public***: The general public: Offering the greatest services and fostering strong relationships need interacting with the general public and learning about their needs and desires.

5. ***Marketing Partners***: Collaborating with marketing agencies which attract new opportunities and help the app reputation.

6. ***Ethical and Religious Advisors***: Seeking advice from ethical and religious consultants to confirm that the application's business practices—such as the demands for modesty—are compliant with Islamic law.

7. ***Payment Providers***: Platforms or banks in charge of handling payments and online transactions within the application.

8. ***Government Authorities***: Government agencies who overlook and maintain rules pertaining to labor laws, business operations, and service delivery.

Stakeholder Name	Role/Interest	Contact Information	Influence/Power	Engagement Strategy
Abdullah Al-Fahad	*Customer*	*abdullah@example.com*	*Low*	*Regular feedback surveys, loyalty discounts*
Sara's Cleaning Co.	*Service Provider*	*info@sarascleaning.sa*	*Medium*	*Monthly performance reviews, promotional incentives*
Ministry of Labor	*Government Authority*	*laborministry@gov.sa*	*High*	*Compliance updates, regulatory consultations*
Saudi Venture Partners	*Investors*	*investments@saudiventure.sa*	*High*	*Quarterly investor meetings, financial reports*
Legal Experts Consultancy	*Legal Advisor*	*Conso@legalexperts.sa*	*High*	*Legal compliance workshops, contract reviews*

Table 1: Stakeholder Management Strategy

Stakeholder	*Stakeholder Role*	*Level of Interest*	*Management Strategy*
Customers/Users	Service Recipients	High	- Regular feedback collection through in -app surveys and ratings systems - Prompt resolution of complaints and issues
Service Providers	Service Providers	High	- Training programs for skill enhancement - Fair compensation and incentive schemes for high performance
Government Authorities	Regulatory Bodies	Medium	- Adherence to all relevant laws and regulations governing service provision and business operations

Table 1: Stakeholder Register

3. Functional and non-functional requirements

3.1 Functional requirements

Sign up

- The app will ask the user first if the user is a customer or service provider.
- The app will take the user phone number, full name, password, address
- It will check if the user has a previous account.

Input: state of users (worker, customer), phone number, full name, password, address.

Log in

- The application first asks whether the user is a customer or a service provider.
- The app collects users' phone numbers, full names, passwords and addresses
- Check if the user already has an account.

Input: User status (employee, customer), phone number, full name, password, address.

Register

Display services

- The system should display all workers to the user.
- The system must display all services that the system can provide User location.

Output: Show services. Output: display services.

Search

- Users should be able to search for specific services or employees.
- The search function should provide suggestions.

Input: staff name, service name.

Output: Suggestions or autocomplete options based on the entered search query.

Select services

- The system must allow the customer to choose the time.
- The system must allow staff to accept or reject user requests.

Input: time, decline/accept job offer.

Output: Selected services, rejected/accepted job offers.

Payment

- The system should provide users with six payment methods (Visa, Mastercard, Apple Pay, Tabby, Tamara, Mada).
- If the user selects Mastercard or Visa, the system will ask the user to provide credit information.

Input: payment method, credit card information. Output: receipt.

3.2 Non-functional requirements

Performance

- Response time: the app must take 1-2 seconds to open and 2 seconds to response to any request.
- Throughput: the app must perform at least 120 requests during peak hours.

Reliability

- Maintenance: During maintenance, the app should work well and performance should not be affected.
- Lag recovery time: The app must have a good recovery from delays to prevent it from terminating

Availability

- Redundancy: The app should have measures in place to ensure high availability and minimize downtime, such as redundant servers or cloud infrastructure.
- Load balancing: The application must effectively distribute requests to servers to increase the uptime of the application

Security

- Data encryption: The application must have a high level of security and perform many encryptions.
- Two-factor authentication: The application must use two-factor authentication when recovering the user account or resetting the password.
- User access control: The app must be able to recognize app users and provide them with access to their data based on their roles using role-based access control (RBAC).
- Secure data storage: The application must securely store, transfer, and retrieve users' data using various encryption techniques.

Maintainability

- Code maintainability: The application should have a well-structured and measurable database to facilitate future maintainability.
- Version control: The application source code must be managed using the control system, which will allow effective contribution between developers and provide a change log to facilitate troubleshooting.

Portability

- Localization: The app should be able to adjust to the user's geographical location and change the language based on the user's location.
- Platform Compatibility: The app should work on different devices and screen sizes.
- Platform Interoperability: The app should work on different operating systems like iOS, Android, Windows.
- Data Migration: The application should allow data migration when the user switches between devices or systems. The user should have access to their data after the switch.

4. Scope Statement

Table 2: Scope Statement

Scope Statement	
Project Title	Helping Hand Application
Project Manager	Zainab Tahhan
Project Sponsor	Retal Malki
Project Objective	Providing an easy-to-connect users with various home service professionals, such as plumbers, electricians, cleaners, etc., efficiently and conveniently. The app aims to streamline the process of finding, booking, and paying for home services, ultimately providing users with a convenient solution for their household needs.
Project Deliverables	▪ Fully functional mobile application compatible with iOS and Android platforms. ▪ User registration and authentication system. ▪ Search and filtering functionality for finding service providers based on location, service type, and availability. ▪ Booking and scheduling features for users to request services at their preferred date and time. Integration of secure payment processing for seamless transactions.
Milestones	▪ Completion of requirements gathering and analysis.

	▪ Development of wireframes and user interface design. ▪ Implementation of core functionality including user registration, service search, and booking. ▪ Integration of payment processing and testing of transaction flow. ▪ Beta testing phase with selected users to gather feedback and make necessary adjustments. ▪ Finalization of application features and preparation for launch. ▪ Deployment of the application to production environment. Post-launch monitoring and support for bug fixes and updates .
Project Constraints	▪ Budget of 500.00 SR ▪ Strict timeline for project completion to meet market demands and competitive pressures. ▪ Dependence on third-party APIs for mapping, payment processing, and other functionalities. Compliance with local regulations and data protection laws impacting service provider operations and user data handling.
Assumptions	▪ Availability of skilled development resources and access to necessary technology stack. ▪ Willingness of service providers to participate in the platform and adhere to service quality standards. ▪ Stable internet connectivity and reliable server infrastructure for uninterrupted service operation. Positive user reception and adoption of the application based on market research and user feedback.

5. Risk and management

Table 3: Risk and management

Risks associated with assumptions	Measures to control risks associated with assumptions
- Strong competition from similar or well-established platforms.	- Providing competitive advantages and implementing effective marketing strategies to attract users.
- Non-compliance with local regulations and data protection laws.	- Conducting a thorough assessment of local legislation and implementing appropriate policies and procedures to ensure compliance.
- Difficulty in finding skilled and qualified employees for app development and maintenance.	- Providing continuous training and developing the skills of the technical team.
- Compatibility issues between the mobile application and different operating systems (iOS and Android).	- Conducting comprehensive testing on multiple devices and different operating systems to ensure compatibility and ease of use.
- Changes in requirements during project development stages may result in delays in delivery.	- Precisely defining requirements from the outset and utilizing an agile development methodology that allows for effective adaptation to changes without significant impact on the timeline.
- Exceeding the budget.	- Close monitoring of project expenses, giving priority to essential features, and effective cost management.

6. Project character

Table 4: Project character

Project Title: Helping Hand Application
Project Start Date: 3 Mar Project Finish Date: 17 May
Budget information: The total budget for the project is 500.000 Saudi riyals.
Project Manager: Zainab Tahhan ,(+966)565871628, Zain.65ab@gmail.com
Project Objective: Providing an easy-to-connect users with various home service professionals, such as plumbers, electricians, cleaners, etc., efficiently and conveniently. The app aims to streamline the process of finding, booking, and paying for home services, ultimately providing users with a convenient solution for their household needs.
Main Project Success Criteia: The project should include user satisfaction, service provider engagement, growth in user base, booking conversion rate, repeat usage, revenue generation, and market penetration.
Approach: • Advanced Search and Filtering: Implementing robust search functionality and filtering options based on service type, location, availability, pricing, and ratings to help users find the most suitable service providers quickly and efficiently. • User-friendly interface for easy service booking. • Database of vetted service providers. • Geolocation to match users with nearby providers. • Secure payment processing. • Ratings and reviews system for quality assurance. • Scheduling and tracking features for service appointments. • Customer support for assistance and issue resolution.

Table 5: project character

Name	Role	Position	Contact information
Retal Malki	Sponsor	CTO	retal.mk10@gmail.com
Zainab Tahhan	Project Manger	PMO Director	Zain.65ab@gmail.com
Renam Alserihi	Team member	Developer	Rriri140@gmail.com
Wed Alalawi	Team member	Developer	wed.sami4@gmail.com
Hani Alhazmi	Team member	Developer	halhazmi@hotmail.com
Hawazin Bin Omran	Advisor	Client support representatives	hawazin.b.omran@gmail.com

7. Kick-off meeting

Figure 2: Kick-off Meeting

Kick-Off Meeting

March 3, 2024

Project Name: Helping Hand Application

Meeting Objective: Initiate the Helping hand application project effectively by introducing essential stakeholders, assessing project objectives, and deliberating on future strategies.

Agenda:

- Attendance Introduction
- Examination of the Project's Background
- Review of Business Case and Project Charter Documents
- Dialogue on the Organizational Structure of the Project
- Conversation about Project Scope, Time, and Cost Objectives
- Discussion on Additional Significant Subjects
- Compilation of Action Items Generated during the Meeting

Kick-Off Meeting cont.

Action item	Assigned to	Due date
Complete system	system architects, project managers, and IT administrators	March 5, 2024
Implement user feedback	Development Team	April 16, 2024
Research new marketing tactics	Marketing Team	May 31, 2024
Optimize technical infrastructure	IT Team	April 23, 2024
Streamline customer support processes	Operations Team	April 30, 2024

Date and time of next meeting: May 14,2024 at 9:00 AM

8. Work Breakdown Structure (WBS)

Work Breakdown Structure (WBS) is a project management technique that helps to break down the required work for completing a project into smaller, more manageable components. It is an essential tool for defining the project scope and providing a comprehensive view of all the tasks required. Typically represented in a hierarchical structure, the components are broken down into smaller sub-elements, making it easier to control, organize, and track.

Work Breakdown Structure (WBS)

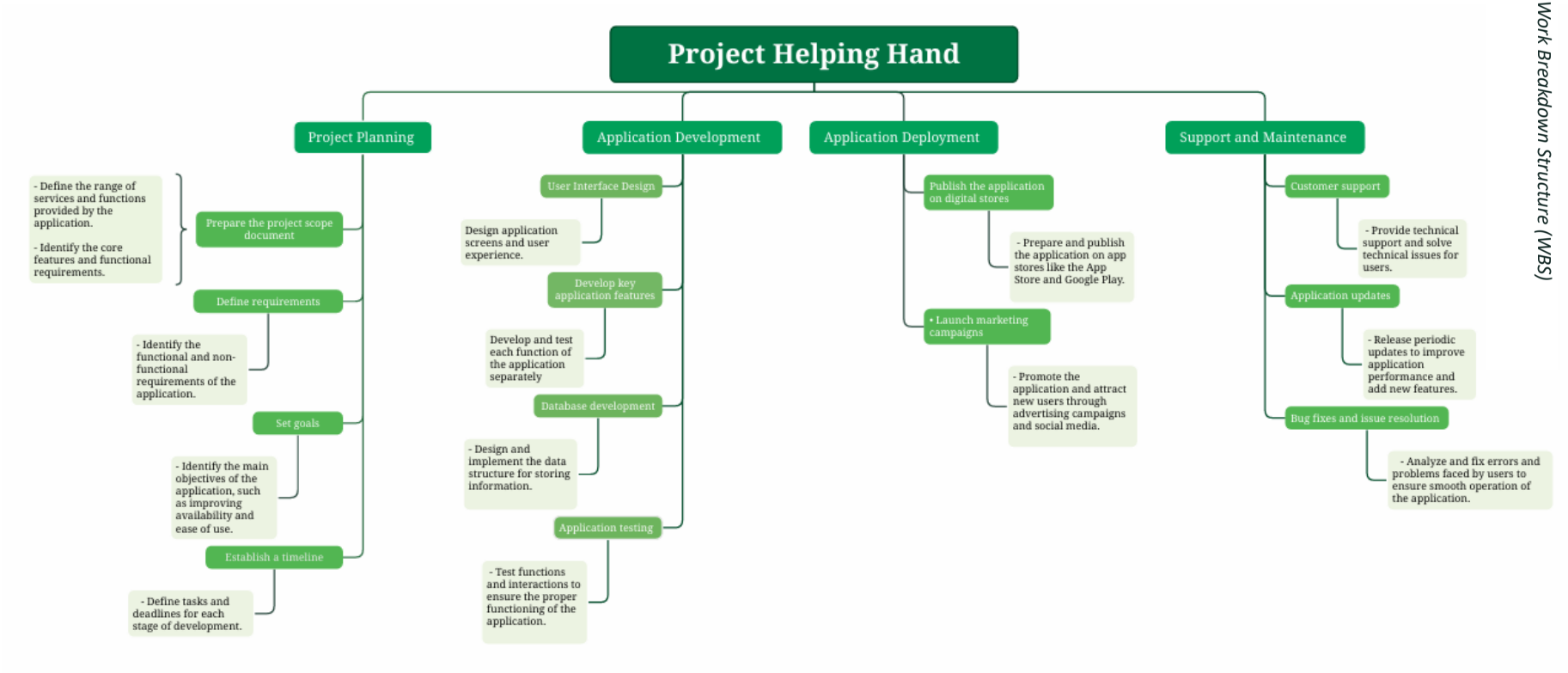
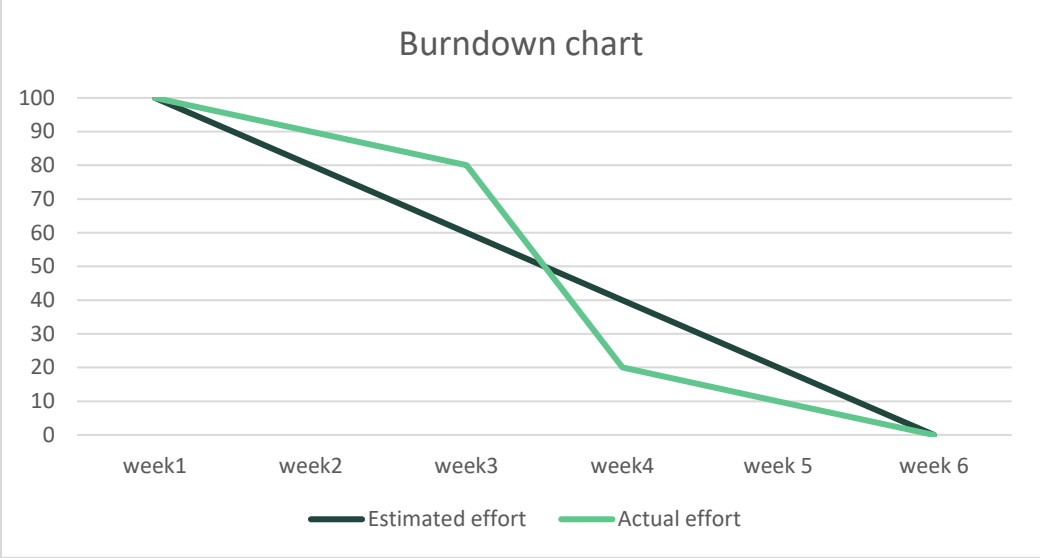


Figure 3: Work Breakdown Structure (WBS)

9. Burndown chart

A Burndown Chart is a tool used to track the progress of work in a project over time, showing the remaining amount of work against time. It aims to determine if progress is on track towards the goal and manage work developments.

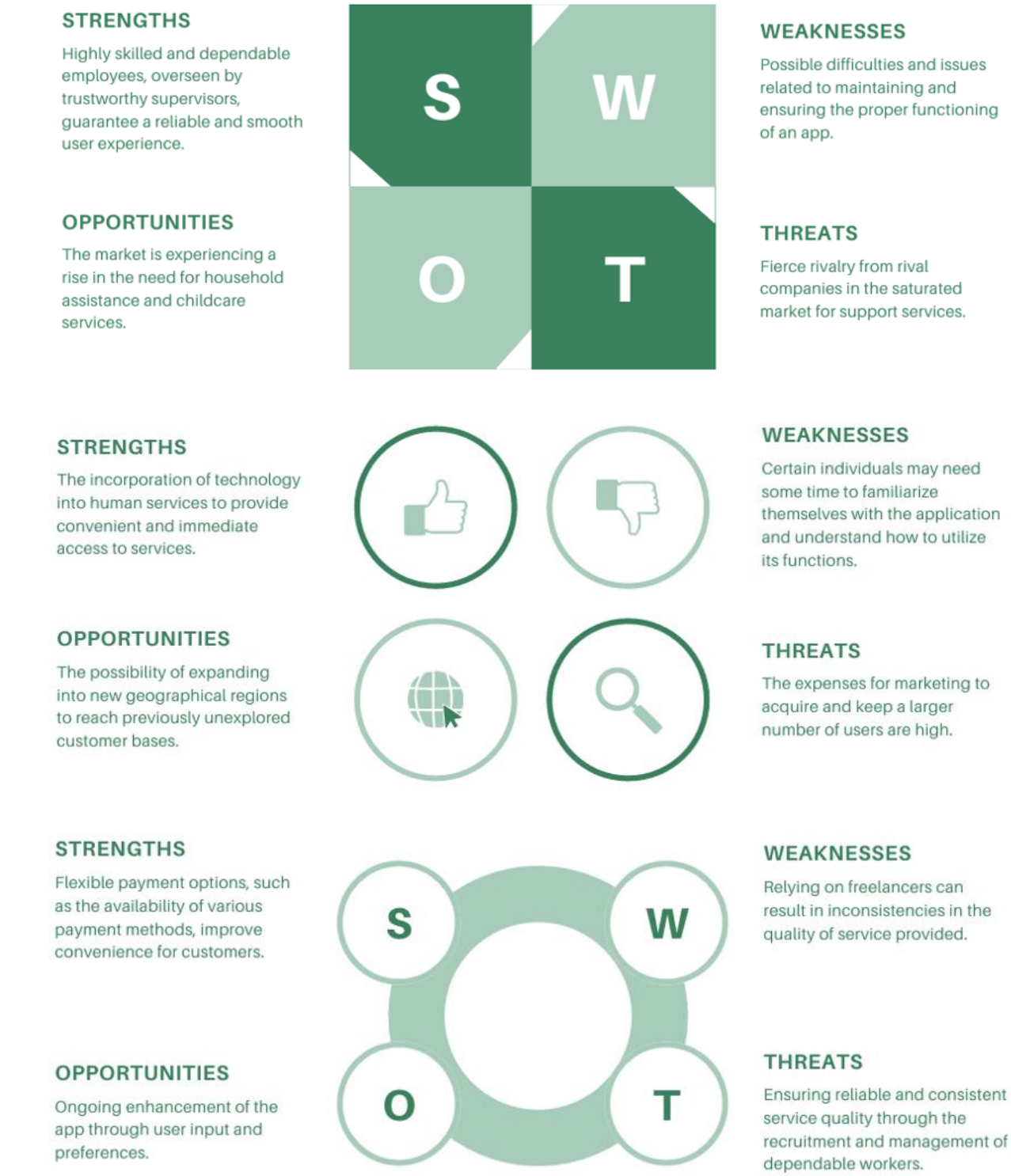
Figure 4: Burndown Chart



The "Burndown" chart above shows a project's progress over six weeks. The chart shows both the project's "estimated effort line" and "real" effort required. The estimated effort line shows a steady and planned reduction in workload, with the goal being to be done by the end of the 6th week. However, the real effort line shows some deviations from the schedule, especially between weeks 3 and 4, where there's a huge drop in the total amount of work left to do. This means that the project faced delays or issues in the first few weeks, but was able to bounce back and speed up in the later weeks, eventually meeting the planned completion schedule by week 6.

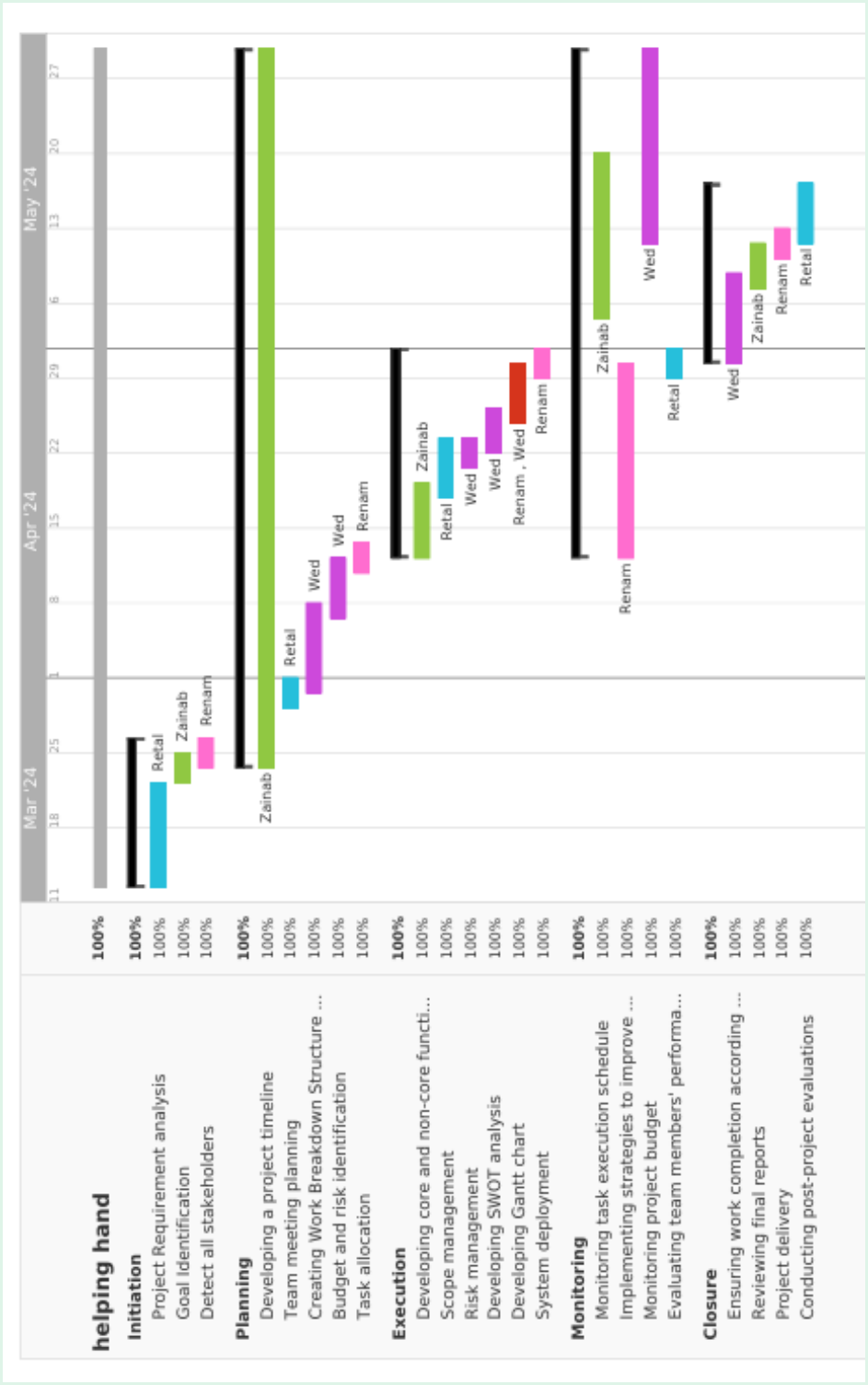
10. SWOT analysis

Figure 5: SWOT Analysis



11. Work Breakdown Structure (WBS)

Figure 6: Gantt Chart



- **Planner**

Using Microsoft Planner

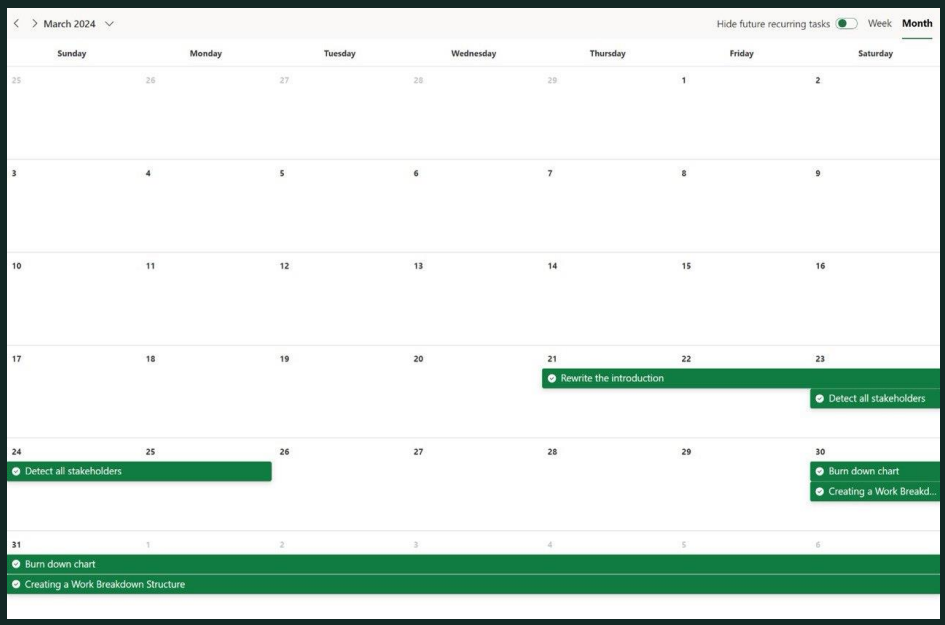


Figure 7: March's finished tasks

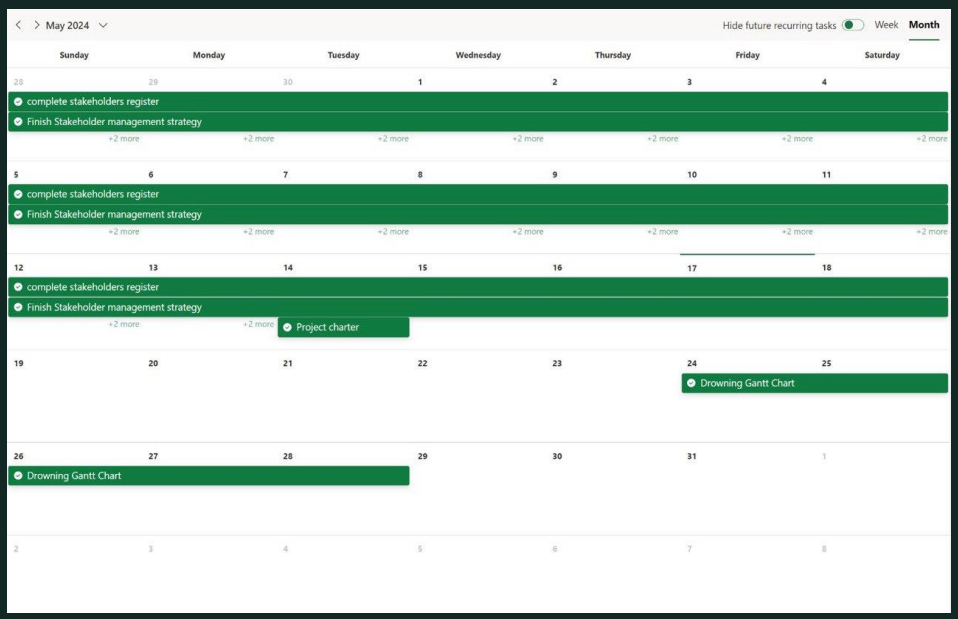
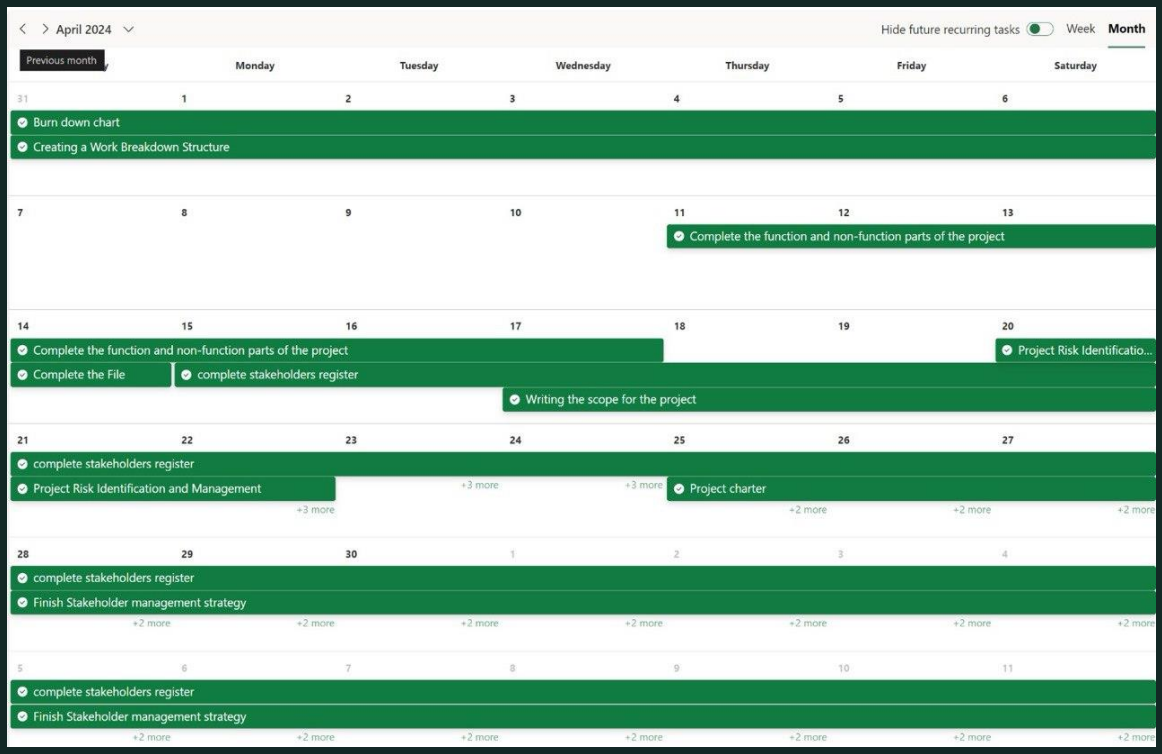
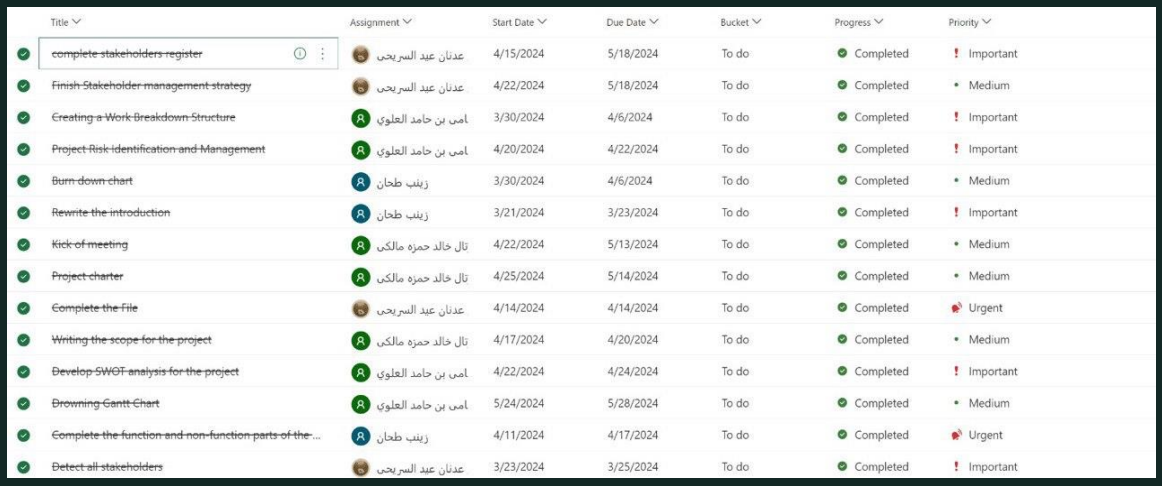


Figure 7: April's finished tasks

Figure 9: May's finished tasks





Title	Assignment	Start Date	Due Date	Bucket	Progress	Priority
~~complete stakeholders register~~	عدنان عبد السريحي	4/15/2024	5/18/2024	To do	Completed	Important
~~Finish Stakeholder management strategy~~	عدنان عبد السريحي	4/22/2024	5/18/2024	To do	Completed	Medium
~~Creating a Work Breakdown Structure~~	امي بن حامد العلوي	3/30/2024	4/6/2024	To do	Completed	Important
~~Project Risk Identification and Management~~	امي بن حامد العلوي	4/20/2024	4/22/2024	To do	Completed	Important
~~Burn down chart~~	زينب طحان	3/30/2024	4/6/2024	To do	Completed	Medium
~~Rewrite the introduction~~	زينب طحان	3/21/2024	3/23/2024	To do	Completed	Important
~~Kick of meeting~~	تال خالد حمزه مالكى	4/22/2024	5/13/2024	To do	Completed	Medium
~~Project charter~~	تال خالد حمزه مالكى	4/25/2024	5/14/2024	To do	Completed	Medium
~~Complete the File~~	عدنان عبد السريحي	4/14/2024	4/14/2024	To do	Completed	Urgent
~~Writing the scope for the project~~	تال خالد حمزه مالكى	4/17/2024	4/20/2024	To do	Completed	Medium
~~Develop SWOT analysis for the project~~	امي بن حامد العلوي	4/22/2024	4/24/2024	To do	Completed	Important
~~Drowning Gantt Chart~~	امي بن حامد العلوي	5/24/2024	5/28/2024	To do	Completed	Medium
~~Complete the function and non-function parts of the ...~~	زينب طحان	4/11/2024	4/17/2024	To do	Completed	Urgent
~~Detect all stakeholders~~	عدنان عبد السريحي	3/23/2024	3/25/2024	To do	Completed	Important

Figure 8: Tasks Chart

12. Tasks distribution

Table 6: Tasks Distribution

Task Name	Member Name
Introduction	Zainab
Define the stakeholders	Renam
Functional and non-functional requirements	Zainab
scope statement	Retal
Risk and management	Wed
Project character	Retal
Kick-off meeting	Retal
Work Breakdown Structure (WBS)	Wed, Zainab
SWOT analysis	Wed
Gantt Chart	Wed, Renam
Project slides	Renam