



اونيورسيتي ملايسيا قهڭ
UNIVERSITI MALAYSIA PAHANG

MINI PROJECT PROPOSAL
(UMP Parcel Management System (UMP-Parcel))

GROUP 5K

| NO. | NAME | ID |
|-----|------|----|
| 1. | | |
| 2. | | |
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CHAPTER 1: IDEA

1.1. Problem Statement

Being a student or lecturer in a university is not an easy feat, it requires wise time management and hardwork. Most of the students' time is filled with assignments while the lecturer is busy providing teaching materials and evaluating their students' works. With this in mind, other tasks such as keeping track with incoming or outgoing parcels should not disrupt the schedule of the students and lecturers. Moreover, queuing at the post office counter sometimes takes hours just to fetch a parcel. One of the possible causes is unmanageable parcels when it arrives in a massive number in a single day. Last but not least, if the parcels are not strictly managed, there is a slight possibility of parcel theft where someone anonymously requests the parcel at the counter, faking his name or Id.

1.2. Concept of Solution

Developing a system with a core functionality of managing parcels for retrieving and distributing may solve the stated problems. First, each and every student and lecturer will be provided an account that will bound to all of their parcels discreetly. These accounts can be used to access the parcel information from the UMP-Parcel website. The parcel's information will not be shown to anyone other than the post office officer and its receiver. This is to avoid anyone from recognizing any parcel information that can lead to parcel theft.

Next, to avoid the unrelenting wait to pick up the parcel from the post office, the UMP-Parcel system will provide a parcel tracking feature. The recipient may either pick up their parcel directly from the office or wait for a runner to deliver it to the

provided address. To fetch the parcel, the recipient will refer to the parcel status from the tracking feature rather than other outside sources such as Tracking.my. This is to ensure that the parcel is ready and sorted out in the UMP post office before being picked up.

1.3. Review of Existing Systems

1.3.1. Pos Laju - <https://www.pos.com.my/>

The Pos Malaysia Group is a dynamic postal (mail, retail, courier, and international), logistics, aviation, financial and supply chain solutions provider with the largest delivery and touchpoint network in Malaysia, offering an extensive retail network experience through its core business segments. The Pos Laju website is used to track your parcel status. Not only that, there is also an outlet finder selection icon to find the nearest outlet to you. Moreover, there is a postage calculator to evaluate the total shipment fee by estimating your parcel weight and the distance of the delivery address.

1.3.2. J&T - <https://www.jtexpress.my/>

J&T Express Malaysia is a courier express company that proudly diversifies its businesses from express deliveries, collection points, warehousing to supply chains; covering the same city, inter-islands and international zone. J&T Express is a reliable integrated logistics provider. When surfing through the website, you might see the promotion that is going on. Next, you are able to see the shipping rates to other countries or states in Malaysia. There is also a track and trace selection box to check what is your current status of your parcel, same as POS Laju.

To view the major differences between these two existing systems, a set of criteria are chosen for comparison as shown in **Table 1.3 Existing System Comparison**.

Table 1.3 Existings System Comparison

| | POS MALAYSIA | J&T EXPRESS |
|---------------------------|---------------------|------------------------|
| TRACK & TRACE | YES | YES |
| POSTAGE CALCULATOR | YES | NO |
| NEWS | YES | NO |
| SHIPPING RATES | YES | NO |
| SEARCH ENGINE | YES | NO |
| MULTI LANGUAGE | NO | YES |

3.3.2. ERD

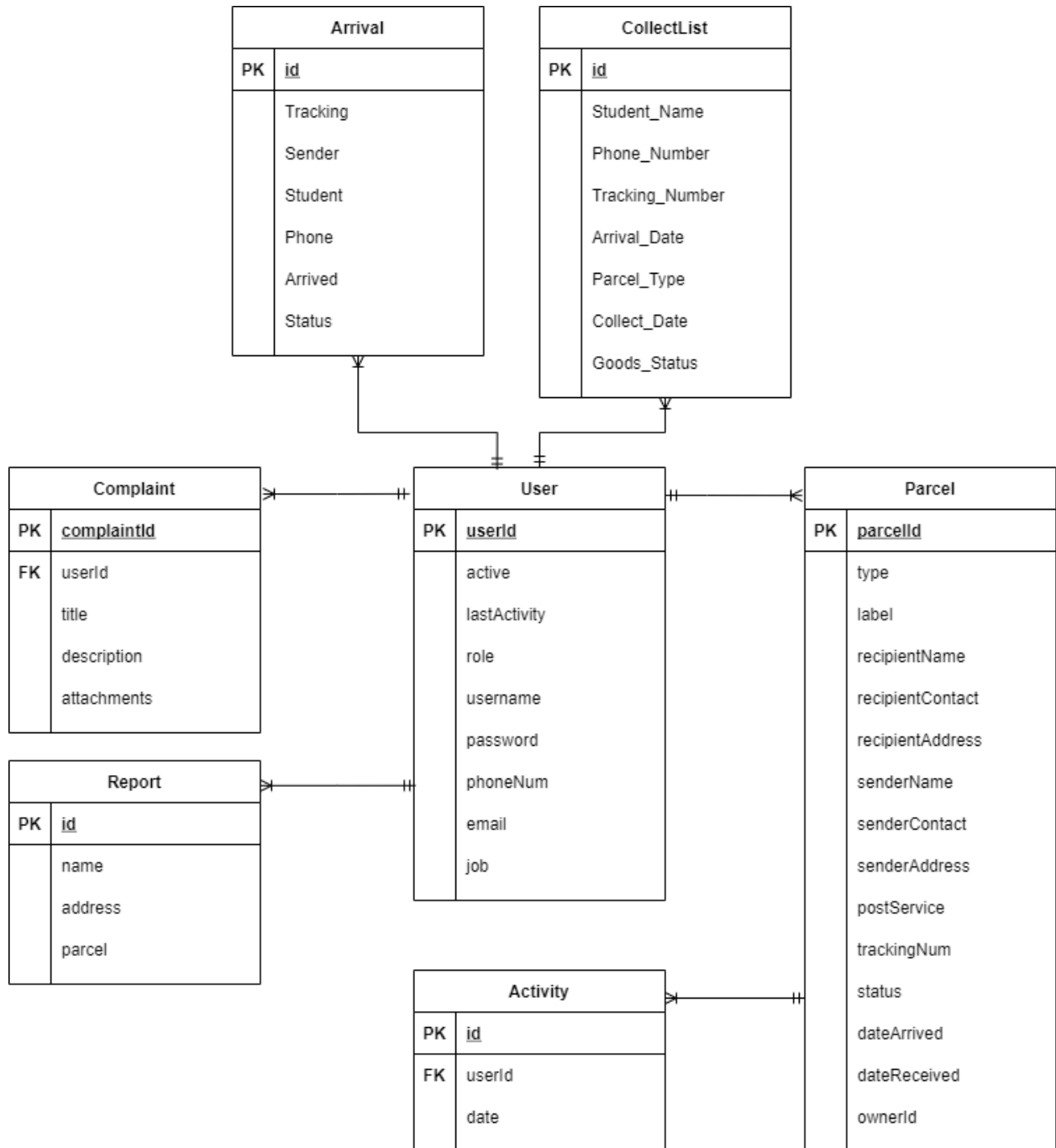
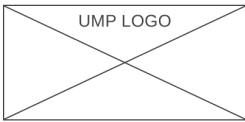


Figure 3.3.2 Entities Relation Diagram

3.4.2 Module 2: Module for UMP Mail Center (Goods Arrival)



UMP PARCEL

USER NAME, 03:30:30 PM MYT

Warden

Search

Goods Arrival

Goods Collection

Recipient


Complaints


Goods Arrival

Track Parcel

Status

Report

Restore  entries

Goods Arrival 

Search:

| NO | Tracking Number | Student Name | Phone Number | Sender Name | Pos Services | Arrived | Will Arrive in | Status |
|----|-----------------|--------------|--------------|-------------|--------------|------------------------|----------------|------------|
| 1 | AG2345678 | MOHD AIDIL | 0165426985 | ALI | POS LAJU | 03/05/2021 15:30 PM | Arrived | Collected |
| 2 | AG9876544 | JOACHIM | 0113467946 | JOSHUA | J&T EXP | 04/05/2021 16:00 PM | Arrived | Delivered |
| 3 | AG5678345 | AMEERUL | 0179258036 | KASIM | POS LAJU | 05/05/2021 16:25 PM | Arrived | Received |
| 4 | AG2409753 | AIN KUSHINA | 0146127904 | WAN AINI | NINJA | 14/05/2021 15:30 PM | 7 Days | In-Transit |
| 5 | AG8365802 | NAJWARAH | 0195103958 | SITI | J&T EXP | 14/05/2021 18:00 PM | 11 Days | In-Transit |

Showing 1 to 5 of 5 entries

Check

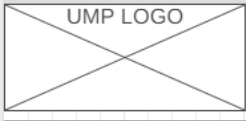
Cancel

1 - 1

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3.4.3 Module 3: Module for Residency Warden (Goods Collection)



UMP PARCEL

USER NAME,04:54:34 PM MYT


RESIDENCY WARDEN

GOODS ARRIVAL


GOODS COLLECTION

RECIPIENT

COMPLAINT

RESTORE 

GOODS COLLECTION

SEARCH 

| NO | TRACKING NUMBER | STUDENT NAME | PHONE NUMBER | SENDER NAME | POS SERVICE | ARRIVED DATE&TIME | STATUS |
|----|-----------------|--------------|--------------|-------------|-------------|----------------------|----------------------|
| 1 | DS12344 | AIMAN | 0124335677 | ABU | POS LAJU | 23/12/20 15:20 PM | READY FOR COLLECTION |
| 2 | NG23566 | CHEN | 0178822429 | THINESH | J&T | 23/12/20 16:20 PM | RECEIVED |
| 5 | AJ59930 | LUKMAN | 0174127760 | NITYA | J&T | 23/12/20 16:20 PM | READY FOR COLLECTION |
| 6 | NG28400 | DINESH | 0198843323 | VINCENT | DHL | 23/12/20 17:20 PM | RECEIVED |
| 7 | AJ34111 | DARREN | 0174652211 | DARRYL | NINJA | 23/12/20 11:20 AM | READY FOR COLLECTION |

FILTER BY

| | | |
|---------|-------------|----------|
| BY NAME | POS SERVICE | STATUS |
| AIMAN | POS LAJU | RECEIVED |

TOTAL NUMBER OF GOODS :

| | |
|---------|----|
| JANUARY | 26 |
| WEEK 2 | 4 |
| 12/5/20 | 10 |

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3.4.4 Module 4: Module for College Resident (Recipient)

logo ump

UMP PARCEL

USER NAME, 01:30:24 PM MYT

Search

Good Arrival

Good Collection

Recipient

Complaints

Good list

Status

Report

Good list

| NO. | Tracking Number | Pos Services | Arrived Date | Delivered | Collected | Receives | Last Pickup Date |
|-----|-----------------|--------------|--------------|-----------|-----------|----------|------------------|
| 1 | 65478690 | J&T | 12/04/2021 | - | - | / | - |
| 2 | PL12376808 | POS LAJU | 12/04/2021 | - | - | / | - |
| 3 | 987656985 | CITYLINK | 15/04/2021 | / | / | - | 22/04/2021 |
| 4 | 65554852 | J&T | 20/04/2021 | / | - | - | - |

*Collected- The parcel that the student can collect at Pusat Mei

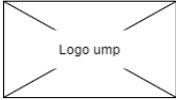
*Delivered - The parcel that the student will receives

*Receives- Student take the parcel

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Figure 3.1.7a Good list



UMP PARCEL

USER NAME,01:30:24 PM MYT

Good Arrival

Good Collection

Receipient

Complaints

Good List

Status

Report

Status

| Tracking number | Status |
|-------------------------|--|
| 987656985 (CityLink) | <div> <div>Arrived Date: 15,04/2021</div> <div>Pickup the parcel before: 22/04/2021</div> <div>Receives</div> </div> |

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Figure 3.1.7b Good

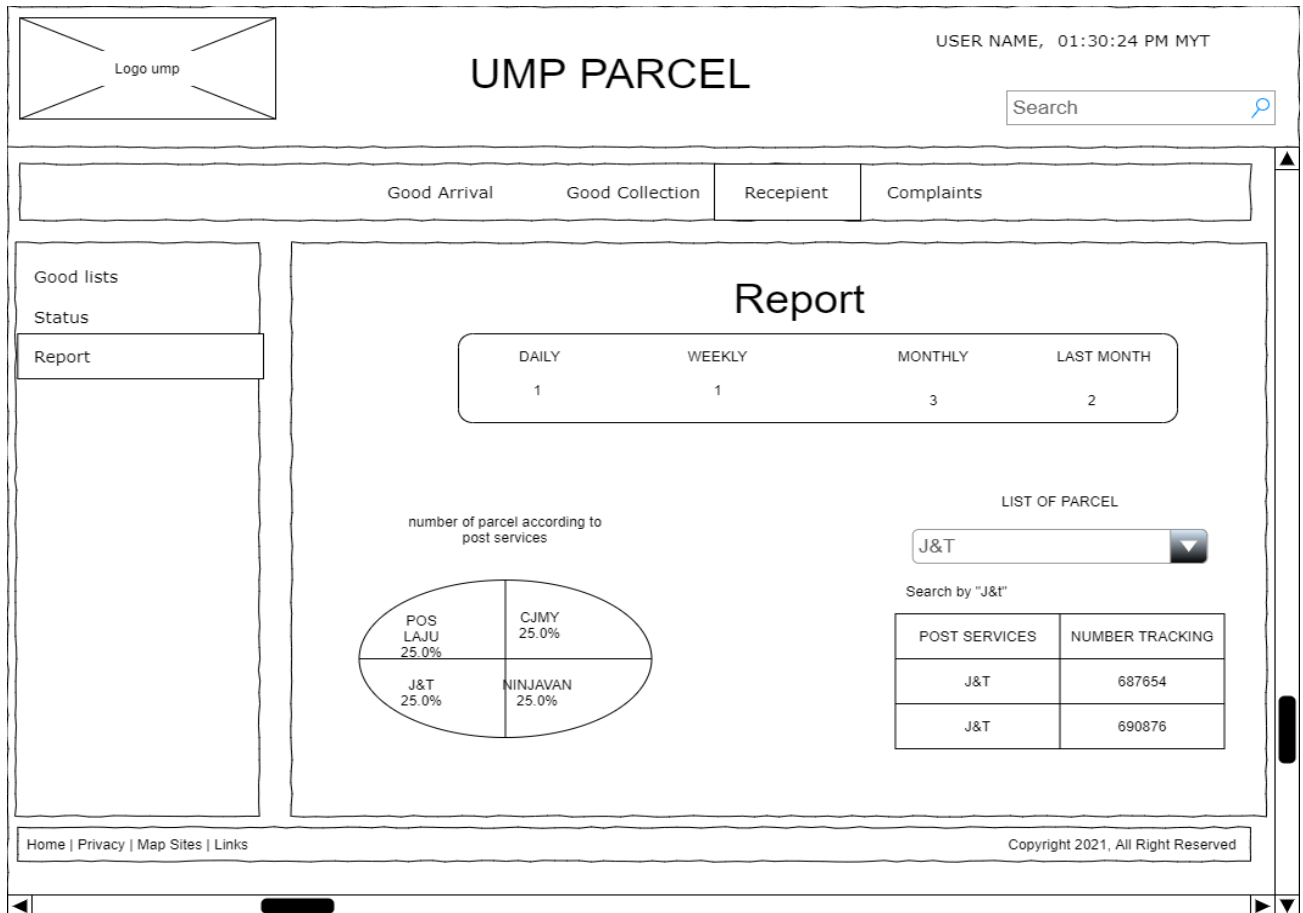





Figure 3.1.7c Goods records

3.4.5 Module 5: Complaint Module

UMP Logo

UMP PARCEL

USERNAME, 01:40:21 PM MYT

| Good Arrival | Good Collections | Recipient | Complaints |
|--|--------------------------------|---------------------|--|
| SELECT PRODUCTS FOR THE COMPLAINT | | | |
| Product | Warranty | Unit price net (RM) | Action |
|  <p>Silver earrings 925 balls - hematite product code: KS0059 Germstone Hematite - silicon</p> | check the guarantee conditions | 79.00 | add complaint |
|  <p>Attract ring rhodium plated product code: RS0048 Size ; 16 adjustable</p> | check the guarantee conditions | 102.55 | add complaint |
|  <p>Silver 925 Bracelet with gold pleated heart product code: BS0096 Size ; 17-20cm adjustable</p> | check the guarantee conditions | 211.00 | Time for making a complaint about this product has expired. If needed please contact us. |

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Figure 3.1.7 Complaint list

UMP Logo

UMP PARCEL

USERNAME, 01:40:11 PM MYT

Search

Good Arrival

Good Collection

Recipient

Complaints

CORRESPONDENCE ABOUT THE COMPLAINT

Add a message :

we will respond in the shortest possible time

Add a photo

Send

Fields marked with asterisk are required.

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Figure 3.1.7 Add complaint

CHAPTER 4: PROJECT MANAGEMENT

4.1. Development Plan

The development of the project is planned to follow the below gantt chart:

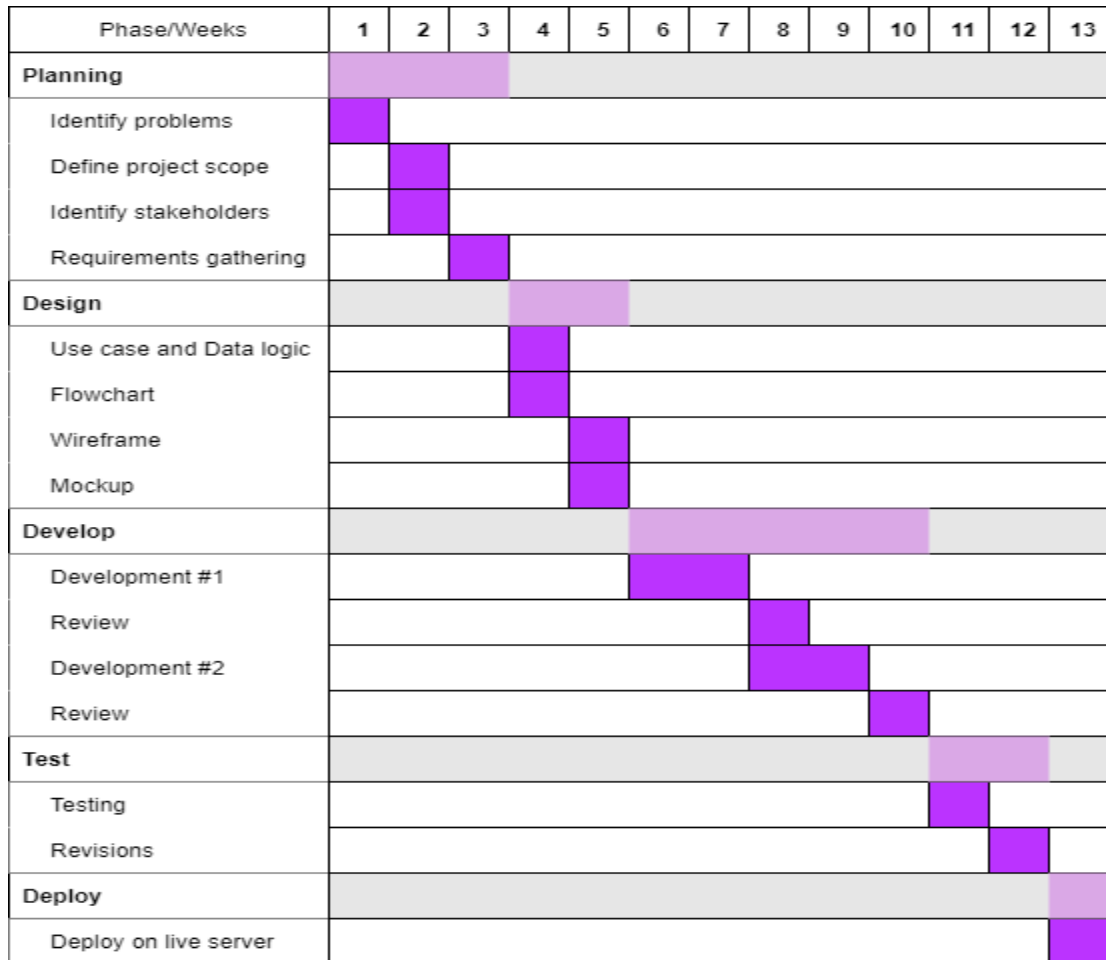


Figure 4.1 Gantt chart

As shown in **Figure 4.1**, we planned to adopt the Waterfall model as the main guideline for the project development. With the current situation where time is the essence, Waterfall might be the best choice out of many others. All of the Waterfall phases are properly laid out in the chart, excluding the Maintenance as it is a long term phase.

4.2. Testing and Deployment Plan

4.2.1. Testing

Once the development phase passes, the system will be evaluated based on the predefined expectations. Each of the expectations are identified based on the requirements of UMP-Parcel. The expectations are as follows:

- a. The system should be able to provide parcel information to the receiver account.
- b. Inputs of the system should be carried out with proper validations.
- c. Any type of user should be able to log in and out.
- d. Logged in recipients should be able to review their parcel status.
- e. System administrators should have the access in managing the users.
- f. The systems ran without errors during any processes.

The testing will be done manually, we won't use fancy testing automation. First, each of the modules will be carefully tested from every aspect such as listed above. If any failure or defects are found, a brief review regarding the defect will be conducted amongst the developers to determine the next action. Once it is resolved and all of the modules are proven to be working, the testing phase will end.

4.2.2. Deployment

To deploy UMP-Parcel live to the Internet, a cloud server is selected as the host with specifications as shown below:

Table 4.2.2 Cloud server specifications

| | |
|--------------------|--|
| Provider | Digital Ocean |
| OS | Ubuntu |
| RAM | 8GB |
| CPU | Intel(R) Xeon(R) Gold 6140 CPU @ 2.30GHz |
| Storage | 160 GB SSD |
| Web server | Apache |
| Domain name | sollab.dev |
| SSL | Yes |

The system will be hosted on Apache web server and assigned to a subdomain of “umpparcel.sollab.dev”, secured with an SSL encryption. The operating system (OS) will be Ubuntu which is an open-source Linux distribution based on Debian. The cloud server is equipped with 8GB of RAM and a CPU of 2.30GHz clocking speed to ensure the server memory is sufficient to handle multiple tasks such as querying. SSD is chosen rather than HDD to provide the best reading and writing speed for the system. Lastly, the top-level of the domain chosen is “.dev”, it mandatorily requires SSL certification to be included.

CHAPTER 5: TEAM MANAGEMENT

5.1. Task distribution

In developing the system with best time efficiency, the system is branched out into **5** different modules. Each of the team members will be given the responsibility of developing one of the modules. The modules and its assignee are listed as below:

- I. UMP-Parcel Administration (Manage user)**
by Muhammad Aidil Syazwan bin Hamdan
- II. UMP Mail Center (Goods arrival)**
by Joachim A/L Agostain
- III. Residency Warden (Goods collection)**
by Muhammad Ameerul bin Jabarullah
- IV. College Resident (Recipient)**
by Nur Najwa binti Ab. Rahman
- V. Complaint**
by Nurain Fitri binti Madzlan

5.2. Meeting Report

Throughout the current process of the system development, we managed to progress as we expected. The overview of our progress can be seen in the below table:

| Date | Duration | Progress | Attendees |
|-----------|------------|---|-----------|
| 28/4/2021 | 10 minutes | - Extracted the requirements for the system | Everyone |
| 30/4/2021 | 30 minutes | - Designed a gantt chart for development planning - Designed the data dictionary | Everyone |
| 2/5/2021 | 1 hours | - Finished a discussion for the | Everyone |

| | | | |
|----------|------------|---|----------|
| | | wireframes | |
| 3/5/2021 | 30 minutes | - Decided the expectation of the system for testing | Everyone |
| 5/5/2021 | 1 hour | <ul style="list-style-type: none"> - Improvised data dictionary - Discussed the matter of deployment planning | Everyone |