**1-Introduction**

In the past few years MUM had faced some problems in managing bicycles, a lot of bikes are almost everywhere in the campus either broken or left unused in a good shape.One of the main reason is that when students leave the campus they leave their bikes.We had think of a system that collect all the bicycles and manage them either by renting it or transfer it to a new comer, recycle it if it is broken or report it if it is stolen. That will benefit both the original owner and the university

**2. Positioning**

**2.1 Problem Statement**

|  |  |
| --- | --- |
| The problem of | *Managing the bicycles for Mum students and allow the student to rent, share, donate their Left unused bikes* |
| Affects | *Students, Faculties, Staff and the University* |
| the impact of which is | *Identifying and Collecting the bicycle that has no owner is a little bit challenging for the university because the bicycle doesn’t have a tag or a sticker on them.* |
| a successful solution would be | *One tool which builds a bike management system that integrates the rule of the university to recycle the old unused bikes, this tool will provide a database and a user interface that is easy to use for the university, staff and students* |

**2.2 Product Position Statement**

|  |  |
| --- | --- |
| For | *Students, Faculties,Staff, University* |
| Who | *Students, Faculties,Staff, University will benefit from it* |
| The (product name) | *is a service category (MUM bike management system)* |
| That | *Will help in recycling the unused bikes and free up some space* |
| Unlike | *Didn’t find competitive system* |
| Our product | *Didn’t find* |

**3. Stakeholder Descriptions**

**3.1 Stakeholder Summary**

|  |  |
| --- | --- |
| University | *Manage the process of the registerning,renting,selling, collecting, recycling the bikes* |
| Staff | *can rent,sell, buy,donate and report stolen bikes* |
| Students | *can rent,sell, buy,donate and report stolen bikes* |

**4. Product Overview**

**4.1 Needs and Feature**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Problem** | **Need** | **Priority** | **Features** | **Planned Release** |
| **Admin** | | | | |  |
|  | Student unable to register their bicycle | Admin must register students before using the system |  | Admin can register students to the system by opening add student form and entering all the necessary information |  |
|  | After the user registered there bicycle,the information is not displaying on the system | Admin has to approve it |  | Admin can approve the registered bicycle by navigating to a list of records and clicking approve button |  |
|  | The donated bicycle is not showing in the rentable records. | The Admin has to change the status from donated to rentable |  | Admin can change the status of donated bicycle to rentable status by navigating to list of donated bicycle |  |
|  | After the user transferring the owner information the status is not changed | Admin has to approve it |  | Admin can approve the new owner information by navigating through transferred records |  |
| **Student/Staff** | | | | |  |
|  |  |  |  |  |  |
|  | Student’s bicycle are not registered | Student bicycle need to be registered |  | Student can register their bicycle to the system |  |
|  | Student are not able to donate their bicycle to the University | First,the bicycle need to registered to the system. |  | Students have the ability to donate their bicycle to the University by just clicking donate button |  |
|  | Student can report stolen bicycle | Student need to specify stolen date |  | Student can login the system and notify the university or other users |  |

**Functionalities of the system:**

1- Student can transfer the bikes

2- Student can donate bicycles to the university

3- the bikes has to be registered to the university and the last will send a sticker to the owner

4- Reporting for stolen bikes

5- Student can rent his bike (to another student or university (rec center))

6- Reporting for accidents

7- asking for repair

8- new comer can request a bike from the university (FIFO)

**Main Classes:**

1- Owner (Student, Stuff or University)

2- Administrator

3- vehicle (bicycle)

**Glossary**

* FIFO:- First In First Out
* Transfer:-Transfering bicycle from one user to another user
* Donate:- Donating bicycle from user to the university
* Owner:-Is a student or a staff who registered a car
* Staff:- All MUM employees