CSC 4330 - Spring 2021

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PROJECT CUSTOMER REQUIREMENTS

Dowling, Inc. wishes to create a bike-sharing business. He needs a web-based application that will be used both by Mr. Dowling to manage the business and by customers for renting bikes. He will have 10 docks with 3 bikes at each dock. Each dock will have the capability to hold 6 bikes. A customer can rent a bike at one station and return it to another station.

A customer must set up an account with Dowling, Inc. He/she must provide a name, address, birthdate, phone number, valid credit card information, and email address. The rental rates for a bike are $5 per half hour, $9 per hour for as long as the bike is rented. If a portion of an hour is used at return, the customer will be charged the full hour. If the bike is returned to a different dock, the customer will be charged an additional $25. If the bike is not returned, the customer's credit card will be charged $500. If a bike is damaged, the customer will be charged $200 for the damage, depending on the damage. The customer must indicate knowledge and agreement of these requirements before he/she is approved to rent a bike. The manager must be able to check for a valid credit card before a bike is unlocked for a customer.

Mr. Dowling needs a weekly report showing bike usage and income of each dock.

USE CASES

Customer (3):

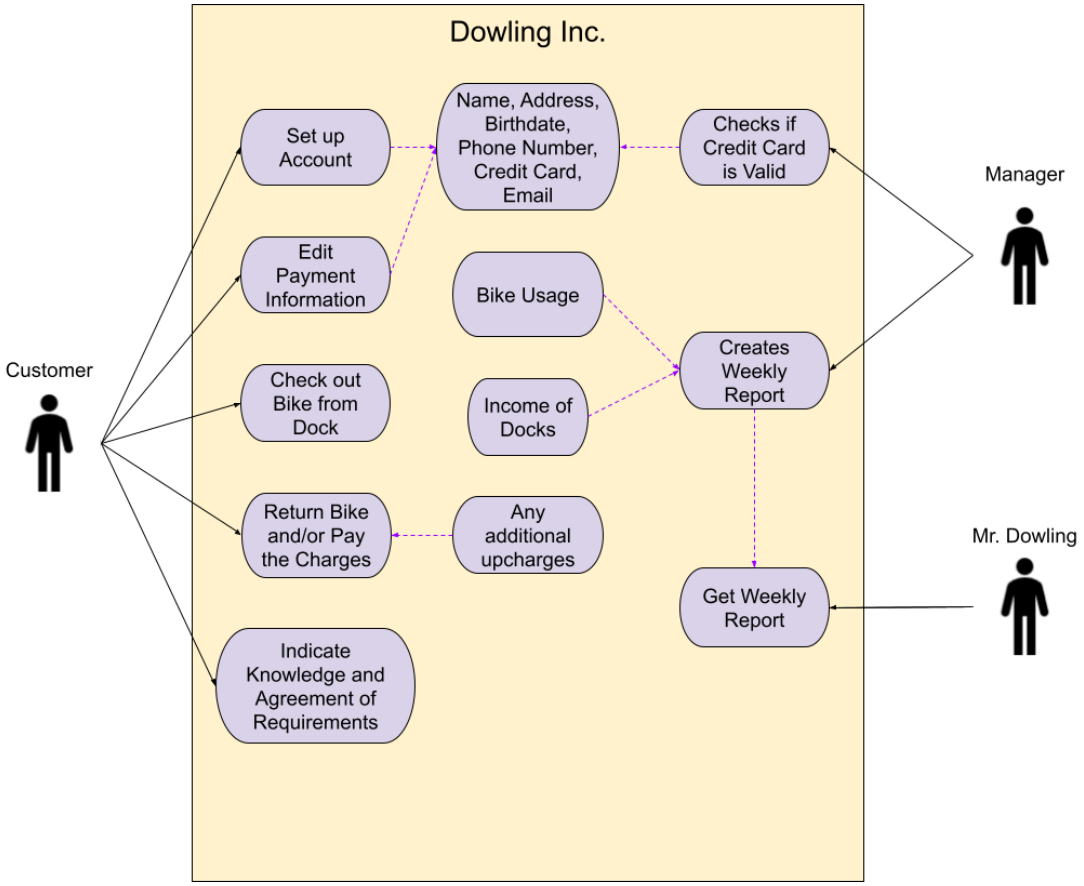
1. Set up an account
2. Edit payment information
3. Rent a bike (Check out a bike)
4. Return the bike (And pay)
5. Indicate knowledge and agreements of requirements

Mr. Dowling (1):

6. Get weekly report

Manager (2):

7. Check valid credit card
8. Create weekly report



USER STORIES

1. A customer sets up an account giving their personal information as well as valid credit card information. The manager checks to ensure the credit card information is valid.
   - 1.1. Scenario 1: The credit card information is valid and the user is authorized to start making bike rentals.
   - 1.2. Scenario 2: The credit card information is invalid and the user is prompted to edit their credit card information before they can be authorized to begin making rentals.
2. A customer rents a bike for t minutes.
   - First round t to the nearest multiple of 30. If t is also a multiple of 60 now, the CT(Cost of time) = $9 * (t/60). If t is not a multiple of 60, the CT = $9 * ((t/60)-0.5) + $5.
   - 2.2. Scenario 1: The bike is returned to the same dock. The customer is charged CT.
   - 2.3. Scenario 2: The bike is returned to a different dock. The customer is charged CT + $25.
   - 2.4. Scenario 3: The bike is returned to the same dock but is damaged. The customer is charged CT + $200.
   - 2.5. Scenario 4: The bike is returned to a different dock and is damaged. The customer is charged CT + $25 + $200.

2.6. Scenario 5: The bike is never returned. The customer is charged $500.

3. Mr. Dowling requests a weekly report.
   3.1. Scenario 1: The weekly report is given with income and usage from each dock.

Project Backlog

- Create web-based application to be used by Mr. Dowling and by customers
  - Application needs to be able to
    - Make accounts
      - Account needs name, address, birthdate, phone number, valid credit card info, and email address
    - Add/edit payment information
    - Rent bikes
    - Return and pay for the bikes
    - Give users the ability to read and acknowledge the requirements to rent a bike
  - Users rental rates are $5 per half hour, $9 per full hour as long as the bike is rented
    - Customer is charged for full hour even if partial hour is used
    - User will pay $25 if bike is returned to a different dock
    - User will pay $500 if the bike is not returned
    - User will pay $200 for damage, depending on what the damage is
  - Manager must check for valid credit card details before customer can receive bike and create a weekly report for Mr. Dowling
  - Mr. Dowling will also get a weekly earnings report and usage for each dock
- We will need to update the sprint backlog weekly for each scrum meeting
- Project backlog will also be subject to change based on what is needed or if requirements change

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Sprint Backlog

- Create Project backlog
- Create sprint backlog
- Create use cases/use case diagram
- Come up with stories and/or scenarios
