

CSC 4330 Group Project

Spring, 2021

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.

OTHER REQUIREMENTS

Each team must choose a team leader who is responsible for helping keep the project on track and informing the team and the instructor when there are problems that need to be addressed in order to have a successful project. The team leader can receive additional credit, calculation explained in the grading section of this report.

GitHub must be used for the project.

DELIVERABLES

The deliverables are shown below with each of the milestones. The report containing the documents is expected to be professionally done and well organized. You may include additional material in each deliverable if you wish. The report should have a cover page on which you list your team number, the names of the team members, and the contributions for each member as determined by the team.

For each deliverable, append to the deliverable materials from the previous milestone (except the first one of course)

SCHEDULE (All dates are subject to change)

January 25 - Project and Team Assignments

February 5 - Milestone #1 Documentation Due – Stories or Scenarios, Use cases, Project Backlog, Backlog for first Sprint, and contribution of each team member as determined by the team *

*If each team member contributes equally, that member would receive a 100%. Total contribution of each member will be determined by the Instructor with input from the team.

(Scrum meetings – February 8)**

** For all Scrum meetings, if more time is needed for the meetings, the remaining meetings will be held during a portion of the next available class period.

February 19 - Milestone # 2 Documentation Due – System Architecture, Sprint Deliverable for 1st Sprint, Updated Project Backlog, Sprint Backlog for Second Sprint, Requirements Specification Document (Figure 4.17), design documents, test plan (as appropriate) and contribution of each team member, determined by the team

(Scrum meetings – February 22)

(Midterm Exam – March 3)

March 19 – Milestone # 3 Documentation Due– Sprint Deliverable from previous sprints, updated Project Backlog, design documents, test plan and results (as appropriate) and, and contribution of each team member as determined by the team

(Scrum Meetings – March 22)

April 2 –Milestone #4 Documentation Due– Sprint Deliverable from previous sprints, updated Project Backlog, Sprint Backlog for 4th Sprint, design documents, test plans and results (as appropriate), and contribution of each team member as determined by the team

(Scrum meetings – April 5)

April 14 – Final Project Submission - Milestone # 5 – Final Project Deliverable, working product, , sprint deliverables from all previous sprints, design documents, test plans and results, and contributions of each team member as determined by the team.

April 19 - 21 – Milestone # 6 - Project Demonstrations**

**Individual Contribution determined by Instructor

GRADING

Each of Milestones 1 – 4 and 6 will constitute 4% of the 40% allocated to the project – total of 20%.

Milestone # 5, the working product, will constitute 20% of the 40% allocated to the project. A project rubric (to be distributed later) will be used for the grading of the Product.

Grading for Milestones 1-4 and 6

Each team member's (TM_i) grade (except team leader) will be computed by the following formula:

$$TM_i = (\text{Milestone grade} * \% \text{ Contribution to Milestone})$$

The team leader's score will be computed by the following formula:

$$TM_i = (\text{Milestone grade} * \% \text{ Contribution to Milestone}) + \text{LeaderFactor}$$

Where LeaderFactor = 1% - 1.5% of TM_i

Grading for Milestone 5 – Project

A project grading rubric will be used (rubric to be distributed later).
