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| **ASSIGNMENT** | |
| **Course Code** | CSC210A |
| **Course Name** | Software Development Fundamentals |
| **Programme** | B.tech |
| **Department** | CSE |
| **Faculty** | FET |

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| **Name of the Student** | PRACHI PODDAR |
| **Reg. No** | 17ETCS002122 |
| **Semester/Year** | 4TH/2ND |
| **Course Leader/s** | Ms.Sahana.P.Shankar |

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| **Declaration Sheet** | | | | | | | | |
| Student Name | Prachi Poddar | | | | | | | |
| Reg. No | 17ETCS002122 | | | | | | | |
| Programme | B.tech | | | | | Semester/Year | 4th/2nd | |
| Course Code | CSC210A | | | | | | | |
| Course Title | Software Development Fundamentals | | | | | | | |
| Course Date |  | | to | |  | | | |
| Course Leader | Ms.Sahana.P.Shankar | | | | | | | |
| **Declaration**  The assignment submitted herewith is a result of my own investigations and that I have conformed to the guidelines against plagiarism as laid out in the Student Handbook. All sections of the text and results, which have been obtained from other sources, are fully referenced. I understand that cheating and plagiarism constitute a breach of University regulations and will be dealt with accordingly. | | | | | | | | |
| Signature of the Student | |  | | | | | Date |  |
| Submission date stamp  (by Examination & Assessment Section) | |  | | | | | | |
| Signature of the Course Leader and date | | | | Signature of the Reviewer and date | | | | |
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| **Faculty of Engineering and Technology** | | | |
| **Ramaiah University of Applied Sciences** | | | |
| Department | Computer Science and Engineering | Programme | B.Tech |
| Semester/Batch | 4th/2017 | | |
| Course Code | CSC210A | Course Title | Software Development Fundamentals |
| Course Leader(s) | Ms.Sahana.P.Shankar and Ms.Supriya M S | | |

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| **Assignment – 1** | | | |
| **Reg.No.** | 17ETCS002122 | **Name of Student** | Prachi Poddar |

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| **Sections** | **Marking Scheme** | | **Marks** | | |
| **Max Marks** | **First Examiner Marks** | **Moderator** |
| **Part A** |  | | | | |
| A **1.1** | Introduction to the topic | 1 |  |  |
| A **1.2** | Importance of requirements engineering | 3 |  |  |
| A **1.3** | Conclusion | 1 |  |  |
|  | **Part-A Max Marks** | **5** |  |  |
| **Part B.1** |  | | | | |
| B **1.1** | Introduction to the project | 2 |  |  |
| B **1.2** | Functional requirements specification | 3.5 |  |  |
| B **1.3** | Non-Functional requirements specification | 3.5 |  |  |
| B **1.4** | Conclusion | 1 |  |  |
|  | **B.1 Max Marks** | **10** |  |  |
| **Part B.2** |  | | | | |
| B **2.1** | Introduction to the structural design documentation | 2 |  |  |
| B **2.2** | User characterization | 2 |  |  |
| B **2.3** | Use-case diagram with Use-case specification | 5 |  |  |
| B **2.4** | Conclusion | 1 |  |  |
|  | **B.2 Max Marks** | **10** |  |  |
| **Total Assignment Marks** | | | **25** |  |  |

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| **Course Marks Tabulation** | | | | |
| **Component-1 (B) Assignment** | **First Examiner** | **Remarks** | **Moderator** | **Remarks** |
| A |  |  |  |  |
| B.1 |  |  |  |  |
| B.2 |  |  |  |  |
| **Marks (Max 25 )** |  |  |  |  |
| **Signature of First Examiner Signature of Moderator** | | | | |

Please note:

1. Documental evidence for all the components/parts of the assessment such as the reports, photographs, laboratory exam / tool tests are required to be attached to the assignment report in a proper order.
2. The First Examiner is required to mark the comments in RED ink and the Second Examiner’s comments should be in GREEN ink.
3. The marks for all the questions of the assignment have to be written only in the **Component – CET B: Assignment** table.
4. If the variation between the marks awarded by the first examiner and the second examiner lies within +/- 3 marks, then the marks allotted by the first examiner is considered to be final. If the variation is more than +/- 3 marks then both the examiners should resolve the issue in consultation with the Chairman BoE.

**Assignment-1**

**Term-1**

**Instructions to students:**

* 1. The assignment consists of 3 questions: Part A – **1** Question, Part B – **2** Questions.
  2. Maximum marks is 2**5**.
  3. The assignment has to be neatly word processed as per the prescribed format.
  4. The maximum number of pages should be restricted to **10**.
  5. Restrict your report for Part-A to 2 pages only.
  6. Restrict your report for Part-B to a maximum of 8 pages.
  7. The printed assignment must be submitted to the course leader.
  8. **Submission Date: 18/02/2019**

# Submission after the due date is not permitted.

* 1. **IMPORTANT**: It is essential that all the sources used in preparation of the assignment must be suitably referenced in the text.
  2. Marks will be awarded only to the sections and subsections clearly indicated as per the problem statement/exercise/question

# Part-A (05 Marks)

Requirement Engineering is the first phase of software development process. The activity of collection and analysis of requirements plays a vital role in software engineering. Any change in requirements provided by the customer during development of a software affects the quality and timelines of software development. However, changes in requirements of products are common. Changes in requirements may create additional workload for software engineers. The requirements are gathered initially from the customer to be used in the software development process. To measure the success of software, the developed software must meet the requirements given by the user. Change in requirements affect the quality of a product.

In this context, develop an essay on the topic: ***“The requirements engineering phase in Software Development Cycle has an impact on the quality of the product”.***

Your essay should emphasize on:

**A1.1 Introduction to the topic**

**A1.2 Importance of requirements engineering in the early stages of software development**

**A1.3 Justification with stance taken and conclusion**

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# Part B (20 Marks)

Scenario: An online reservation system aids in the efficient management of activities such as reservation and cancellation of train, bus, flight and movie tickets, and hotel rooms. You are required to develop an online reservation system in consultation with your course leader:

* 1. **(10 Marks)**

Analyze the requirements by elicitation, elaboration and negotiation to develop formal requirements specification for the online reservation software. Your report should include the following:

**B1.1 Introduction to the online reservation software**

**B1.2 Functional requirements specifications**

**FR1***:*The software should be able to allow the user to sign up if he/she is a new user else allow the user to log in with his/her email id or phone number along with a password.

Stakeholders owning the requirements: Administrator, End user

Dependent on requirements: --

**FR2:** The software should be able to allow the user to reset the password if he/she forgets it, by sending an OTP to the registered phone number.

Stakeholders owning the requirements: Registered user

Dependent on Requirements: FR1

**FR3:** The software should display the list of all the movies currently running in theatres with their location i.e the name of multiplex. The list should contain the name, rating, and cast & crew details of the movie.

Stakeholders owning the requirements: Admin, Registered user

Dependent on Requirements:FR1, FR2

**FR4**: The software should be able to allow the user to select a movie according to his/her choice.

Stakeholders owning the requirements: Registered user

Dependent on Requirements: FR3

**FR5**: After selecting the movie, the software should be able to display the venues, timings, and the seats available and allow the user to select as many seats as he wants according to his choice.

Stakeholders owning the requirements: End user

Dependent on Requirements:FR1, FR4

**FR6:** The software should be able to allow the user to make payment.

Stakeholders owning the requirements: Registered user

Dependent on Requirements:FR1, FR4, FR5

**FR7:** The software should be able to allow the admin to add new movies and movie schedules.

Stakeholders owning the requirements: Admin

Dependent on Requirements: --

**FR8:** The software should be able to display the confirmed tickets, containing the venue, timing and seats details if the payment is successful.

Stakeholders owning the requirements: Admin, Registered user

Dependent on Requirements: FR1, FR6

**FR9:** The software should have an order history which will contain a record of all the tickets booked by the user in the past.

Stakeholders owning the requirements: Registered user

Dependent on Requirements: FR1, FR6, FR8

**FR10:** The software should be able to allow the user to cancel the tickets following which a refund should be initiated.

Stakeholders owning the requirements: Registered user

Dependent on Requirements: FR1, FR6, FR9

**B1.3 Non- Functional requirements specifications**

**NFR1**: The software should be user friendly.

**NFR2:** The software should have a modern, precise and accurate.

**NFR3:** The software should have a safe and secure payment environment.

**NFR4:** The software should be efficient in terms of performance and response time.

**NFR5**: The software should be free from bugs and technical errors.

**B1.4 Conclusion**

# (10 Marks)

Develop the context level design for the online reservation software using Object-Oriented approach with User characterization and Use-case diagrams.

Your report should include the following:

**B2.1 Introduction to the behavioural design documentation**

**B2.2 User characterization**

**B2.3 Use-case diagram with Use-case specification**

**B2.4 Conclusion**