Marwadi University

FACULTY OF COMPUTER APPLICATIONS
Bachelor of Science – Data Science

Course	: B.Sc. (DS)
Sem.	: 4
Subject Code	: 05DS0405
Subject	: Mini Project – 1 (R/Python)
Objective	: 1. To apply programming knowledge for solving industrial (or society) problems. 2. To collect, analyze requirement, prepare plan and schedule and monitor the software project. 3. Development and coding software modules. 4. Testing of large project cohesively. 5. Documentation of project.
Prerequisites	: Basic knowledge of programming concepts.

Guidelines

- The project definition should be finalized internally at the beginning of semester. It is recommended that the team should be of 1-2 students.
- Project plan along with the division of work amongst teammates
- would have been prepared and got approved within a week of the starting of semester from internal guide or project coordinator.
- It is recommended to follow different software engineering framework activities for the project development like requirement collection, designing model, coding, testing etc.
- Coding standards should be followed meticulously. At the minimum, the code should be self-documented, modular, and should use the meaningful naming convention.
- It is advisable that object-oriented methodology is used with reusability of classes and code, etc.
- A complete code is mandatory to present at the end of semester for evaluation. Student may be asked to write the code related to the project during examination.

- Project can be developed using either with R Language or Python Programming, which has been already learnt and coding should be there in project development.
- The project should be free from plagiarism of any kind.
  The documentation should include a chapter on "Learning during Project Work", i.e. "Experience of Journey during Project Duration".
- Mentor/ Internal guides (i.e. the faculty members) must devote time, allocated as per the time table to guide the students for the project. The time allocation will be in accordance with the teaching scheme for project.

Accomplishments of the student after completing the course:

- Doing the project will enable the student to go through rich experience in developing projects & application of programming knowledge. Such an experience will include encountering various technical issues, finding sources to resolve the issues and finally finding the solution of all these issues satisfactorily.
- Thinking analytically, analyzing and synthesizing requirements and complicated information for getting a good comprehension of the solution methodology to be adopted.
- Ability to document and write well.
- Organizing the time effectively.
- Working with teammates and generating substantial output of the efforts.
- It will prepare the students for analyzing and programming for industrial problem and large projects working future.

Course Outcomes:

1. Students able to apply programming knowledge for solving Industrial (or society) problems.
2. Students able to collect, analyze requirement, plan, schedule, and monitor the software project.
3. Students able to design and development different coding modules for software.
4. Students able to check the quality assurance of the development project cohesively.
5. Students able to prepare documentation report of project for the future expansion.

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Course Outcomes – Program Outcomes Mapping Table:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	H	L	L		L			L
CO2		L	L		L			M
CO3		M	L	L	M			
CO4		H	H	M	H	L	H	
CO5	H		M	M	H	L	M	H

Text Book:

1. "R for Everyone", Jared P Lander, Pearson Education 2017, Latest Edition.
2. Core Python Programming (Second Edition), Wesley J. Chun, Prentice Hall (ISBN : 0-13-226993-7), First Edition.

Reference Book:

1. Introductory Statistics with R, P Dalgaard, Second edition.
2. Python Programming for Absolute Beginners, Michael Dawson,Premier Press (ISBN:1592000738), First Edition.

Web References:

1. https://www.geeksforgeeks.org/r-programming-language-introduction/
2. https://docs.python.org/3/tutorial/

App References:

1. https://play.google.com/store/apps/details?id=com.krazeapps.rprogrammingcompiler&hl=en_IN&gl=US
2. https://play.google.com/store/apps/details?id=ru.iiec.pydroid3&hl=en&gl=US&pli=1