GUJARAT TECHNOLOGICAL UNIVERSITY
Master in Computer Application (Integrated MCA)
Year IV – (Semester-VIII) (W.E.F. December 2016)

Subject Name: Software Project - 6
Subject Code: 4480604

1. Learning Objectives:

a. The software project is expected to expose the students to real life situations and provide them an insight into actual functioning of an organization.
b. During the project development, the student is expected to get knowledge and experience of the entire life cycle of project development, its tool, techniques and methodology.
c. After completing the project the students should be in a position to handle projects in any organization independently.

2. Pre – requisites
- Basic knowledge of computer science core subjects.

3. General guidelines for software project

a. Team size : maximum 2 members
b. Project features: uniqueness
c. Brainstorm a question of interest and frame problem statement
d. Collect data: Many free data sets are available free for analysis e.g. Datasciencecentral.com, data.gov, kdnugetts.com, SPIDEX database etc.
e. Select Data set having large volume (records in thousands).
f. Summarize your data with appropriate numerical and graphical methods
g. Prepare a report of your project that conveys your data analysis process, results, and conclusions

4. Few Suggested Areas for Project Selection

- Information Retrieval
- Information Summarisation
- Information Extraction
- Data Warehouse (ETL operations and processing)
- Data Mining (Association, classification, clustering, Neural networks.. etc)
- Image Processing
- Wireless network
- Cloud computing
- Big data
- Data Science
- Network Analysis

- Life Science
- Media e.g. you tube content analysis
- Result Analysis

5. Documentation

Reports – should contain the following sections (at a minimum):
   a. Introduction – Describe the data and what question of interest you are considering
   b. Problem Statement
   c. Organization of Data
   d. Data visualisation through summary/tables
   e. Methods / Techniques
       i.   Identification of technique and tool used
       ii. Application of techniques and tools used
       iii. Discuss   the assumptions that inference procedure has
       iv. Discuss **how** you will check those assumptions
   f. Results
       i.   Preliminary Analysis
   g. Graphical description of data
   h. Numerical description of data
       i.   Formal Analysis
   i. Conclusions
   j. Future Analysis
   k. Appendix
       i.   Acknowledgment of sources
       ii. Relevant graphs if any
       iii. Inference output (output with the test output)
       iv. Data Set

6. Following is expected to be demonstrated
   a. The execution of the entire Big Data project
   b. The execution of the supporting Analysis techniques