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| animatedLOGO | **Assignment No. 03**  **Semester: Spring 2021**  **Software Engineering-1 (CS504)** | **Total Marks: 20**  **Due Date: 24–07-2021** |
| **Solution**  **NAME: TAMKEEN SAJJAD**  **ID: MC200400003**  **Course: MIT** | | |
| **Total Questions : 03 Total Marks:20**   |  |  | | --- | --- | | **Real-world/Example Application** | **Design Pattern** | | Print Spooler | Creational Patterns: Singleton: used for creating classes which must have only a single instance. Print spooler can be made a singleton to avoid multiple concurrent accesses and creating deadlock | | Oven’s Preprogrammed Switches Interface | Factory Pattern and Abstract Factory pattern: Adapter Design pattern | | Weather Alert App | Observer Design Pattern: The subject only knows the abstract Observer and does not know details of the concrete class. |   **Question No. 1: (6 Marks)**  **Question No. 2: (4 Marks)**   |  |  | | --- | --- | | **­­Application Systems** | **Architectural Styles** | | Operating System | Layered Architecture Style is the suitable as the different layers are used to provide services and functionality and inner layers are closer to the machine hardware than the outer layers. | | Compiler | Data Flow or Pipes and Filter Architecture Style: Compilation phases are pipelined, though the phases are not always incremental. The phases in the pipeline include: lexical analysis + parsing + semantic analysis + code generation |       **Question No. 3: (10 Marks)**   |  |  | | --- | --- | | **Code Statements without proper coding conventions** | **Code Statements with proper coding conventions** | | float sum = .25;  //declaring a float variable | float fltSum = 0.25; //declaring a float variable fSum | | string bookname;  //declaring a string variable for book name | String bookName; //declaring a String variable for a book name | | if (isEven) printEven(); //conditional statement | //conditional statement  if (isEven)  printEven(); | | floatValue = intValue //type casting | //type casting  floatValue = (float)intValue; | | double speed = 0;  //declaring a double variable | //declaring a double variable  double dblSpeed = 0; | | | |