**Assignment # 3**  **Creating and Using Classes (10 points)**

**Weight:** **10%**

**Instructions:**

* This is an individual assignment so work submitted should be created by you
* Submit java files and the output of the program by adding into zip file on BlackBorad
* You should prepare up to 5-minute video and submit the link to it. The video should:
  + - Briefly show the code you created and demonstrate the execution of the program.
* Late assignment will be penalized with **5% per day** and will **not be accepted after 5 days**

**Description:** Develop an application to build the teacher’s schedule based on the courses he/she assigned to teach for the Winter 2023 Term of IT Solutions program. To build the schedule, the teacher will provide his/her id and name and will select up to 5 pre-existing courses. Once a teacher is finished with the selection of courses, it should print the schedule for the teacher. A teacher can be assigned to teach the same course but for a different CRN number. Two courses will be the same if the CRN number for them is the same.

For each course it provides the CRN number, course code, name, day, time of the course, and room number.

Your solutions should develop and use the following classes:

* Teacher
  + Should have fields needed for the schedule of the teacher i.e. id, name and course details.
  + Accessor and mutator methods for the fields.
  + Provide possible constructors with appropriate default values to the fields
  + Define needed constants.
  + Define equals and/or toString method as needed.
* Course
  + Define as per need of the assignment.
* CourseManager class
  + Should provide a course based upon the CRN # of the Course
  + Create list of courses with the default data
  + Able to print the course details if course is provided
* TeacherManager class
  + As per your need.
* MainApp
  + Implement the main logic for the problem using the developed classes and methods.

**Evaluation**: Your work will be evaluated based upon the following criteria:

**Classes (4 points) –**

* Created suitable Teacher, Course and the manager classes

**Functionality (3 points)** –

* Accepting the needed data with proper message (1 point)
* Performing needed data validation and displaying appropriate messages (1 point)
* Displaying the output in the proper format. (1 point)

**Quality (3 points)** –

* Used proper Java Conventions (1 point)
* Proper indentation and comments (1 point)
* Demonstration of proper use of static/non-static members, classes/objects methods (1 point)