Object Oriented Programming LAB – BSDSF22

(Morning and Afternoon)

Lab 06 – 13-10-2023

Task 01 (40 Marks)

Define the class named **Batsman** with name, country, and a list of score he made in various matches.

You have to create member functions for the following functionalities.

- Getters/setters, those really required.
- Constructor to generate accept *no of matches* (1-95) as parameter or randomly generates *no of matches* (1-95) when no parameter is passed. Later, it calls randomScores (???) function appropriately.
- randomScores (int) as *private member* function having parameter for *no of matches;* set no of matches, create and initialized a list of scores with values randomly between 0-180, but some values may be upto 350, or seldomly upto 500.
- calcTotal() to calculate and return total score of a batsman from array of scores.
- calcAverage() to calculate and average of the batsman.
- findMaxScore() to search and return highest score of the batsman.
- count50s() to count and return number of 50s of the batsman.
- count 100s() to count and return number of 100s of the batsman.
- show()to show the data related to a batsman in the following format:

```
No of Matches: 5
Scores: 34 129 67 43 140
Total Score: …
…
```

Task 02 (10 Marks)

- Create a list of 3 or more batsmen and exhibit initialization through different calls to constructors, later show the data of each batsman one by one.

********** The End **********

Just think the definition of the class named **ROBOT** with following functionality. The robot is associated with rectangular floor conceptually divided in rows and column, with some have obstacles.

```
getRobotName(): str
setRobotName(n: str): None
getRowNumber(): int
setRowNumber(v: int): None
getColumnNumber(): int
setColumnNumber(v: int): None
getDirection(): str
voidsetDirection(d: str): None
```

```
setRobot(nm: str, cx: int, cy:
     int, dr: str): None
canStep(front: str): bool
takeStep(): None
turnLeft(): None
turnRight(): None
turnBackword(): None
show(): None   # may be str
```