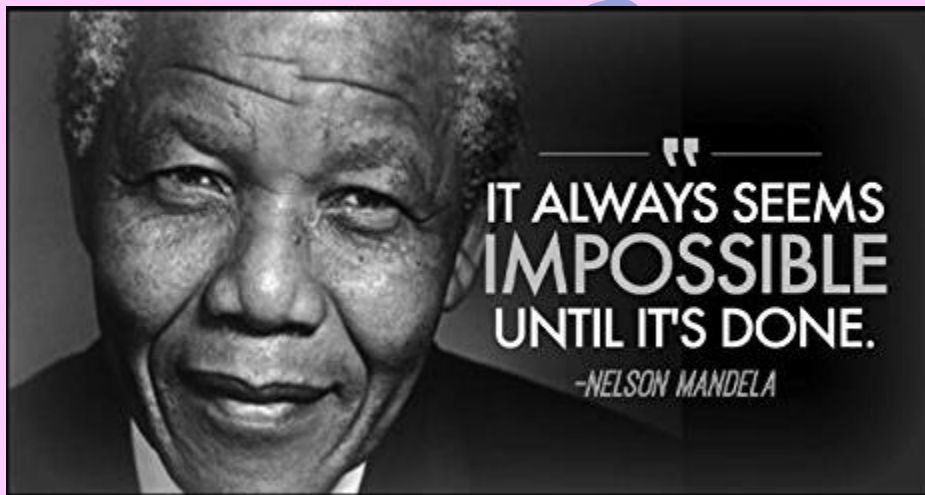


# DEV1BO1 - Development Software

15<sup>th</sup> September 2022  
Course Lecturer: Sandile Thamie Mhlanga



## Additional Tutorial 1: Loops and OOP



### Instructions

The concepts included in the tutorial were covered in class and also on LU 3 part 1 and 2 notes. The concepts covered in this tutorial have been covered by the lecturer. The tutor will create one application to illustrate some of the concepts covered in this TUT.

**This TUT is a Face-to-Face session. Submission is required. Attendance and Submission counts for marks. TUT submitted remotely without attendance will attract zero marks.**

- **IMPORTANT:** Please name your Visual Studio Solution like so (failure to do so will attract a **1%** penalty):
  - [STUDENT\_NO]\_[SURNAME]\_Additional1
  - (e.g. 222833200\_Mhlanga\_Additional1
- **PLAGIARISM:** Please refer to your Learning Guide as well as the latest University of Johannesburg's plagiarism policy document entitled: "POLICY: PLAGIARISM"
- **COPYING:** This is an individual assignment; if any copying is detected, all parties involved will score a **0%** for the assignment and **WILL** face disciplinary consequences

### Question 1

A distribution manager of a newspaper company employs 25 youth to assist deliver the newspaper early in the morning. She wants to know the average number of newspaper deliver by one youth, and also how many youths deliver more than the average, how many deliver less than the average and how many deliver the number equal to the equal to the average. Develop a C# application that generates random numbers between 25 – 58 of papers delivered by the 25 youth. The application must solve the give problem and display the average, the number exceeding the average, the number less than average and number equal to the average.

### Question 2

Create a class called Date. The class three data members of type *int* which are year, month, day respectively. The class must have a default construct that assign 1900 to the year, 1 to the month and 30 to the day. Include a mutator method called *setDate(int,int,int)* which set the data members with customized values. The class must have a method called *increaseDate(int)* which accept a number of days. The method must increase the date based on the number of day as shown in **Figure 1**. Include a *ToString()* method that return the date in the format year/month/day.

In the main() prompt the user for the relevant information as shown below. Invoke the different methods to get the below output.

```
The default date: 1900/1/30
Enter year: 2000
Enter month: 3
Enter day: 28
Enter number of day to increase date: 12
2000/4/10
```

Figure 1

```
The default date: 1900/1/30
Enter year: 1999
Enter month: 10
Enter day: 10
Enter number of day to increase date: 750
2001/11/10
```

Figure 2

```
The default date: 1900/1/30  
Enter year: 2002  
Enter month: 7  
Enter day: 17  
Enter number of day to increase date: 39  
2002/8/26
```

Figure 3

**NB: This TUT must be submitted by 23:59, Tuesday 20th of September 2022**

TUTS