STRUCTURE QUESTION (20 Marks)

❖ **Title**

No	Title
0.	Cinema/Entertainment outlet
1.	Restaurant/Eatery
2.	School/College/University
3.	Hospital/Clinic
4.	Hotel/Chalet
5.	Utility Bills
6.	Human Resource
7.	Transportation (air,land,sea)
8.	Tourism
9.	Sports Activity

1. You are required to write a complete program based on the title assigned to you. Your title is based on your last digit of your student id.

   Ex1: Student id 123456789, write a complete program on Title No 9 (Sports Activity).
   Ex2: Student id 123456731, write a complete program on Title No 1 (Restaurant/Eatery).

❖ **Program Requirement**

1. You can write any program based on the title assigned.

2. The program must fulfill ALL the requirements below. The requirements listed below are the MINIMUM requirement. Your program may extend beyond the requirements if needed.

   a) Create at least one (1) base class.

   b) Create at least two (2) derived classes that inherit from the base class created in 2(a).

   c) Create at least one (1) object for each class and one (1) array of objects for one of the class.

   d) Create at least one (1) default constructor for all the classes.

   f) Apply dynamic memory allocation using keyword new and delete for any object or array of objects.

   g) Create at least one (1) virtual function.

   h) Write sufficient comments to explain your program.

   (Note : Only a reasonable level of user input checking is needed. Assume that a user will input text and numbers in good faith. He/she will not purposely enter text into a number field and will not key in non-alphanumeric characters for all text fields.)

❖ Plagiarism

COPYING and SUBMITTING codes from other sources is not allowed except codes given in this course. If plagiarism is detected, all parties involved will get 0 marks.

❖ Expected Deliverables

- ✓ Fulfill all requirements.
- ✓ Error-free program.
- ✓ Nice and neat output.
- ✓ Program is written in a well-indented format for readability.
- ✓ Sufficient comments for the reader/programmer to understand the source code.
- ✓ Screenshot of program output.

❖ Submission Methods

1. Write at the top part of the .cpp file your details as comments.

```
/*******************************
Name : Megan Bright
Id : 123456789
Section : TC01
Title : Sports Activity
*******************************/
```

2. Put the .cpp file and screenshots of your program output (.png) in one folder.

3. Zip the folder and name it as "StudentName.zip". Ex : Megan_Bright.zip.

4. Upload in MMLS.

5. Submission is due on Wednesday, 21st October 2020, 6.00 pm.

Evaluation Form

No	Item	Marks
1.	Define base class. -class structure -data members and member functions -functions logic	/ 3
2.	Define derive classes (minimum two derived classes). -class structure -data members and member functions -functions logic	/ 6
3.	Usage of object and array of objects.	/ 2
4.	Default constructor.	/ 1
6.	Assign dynamic memory allocation to object or array of object using new and delete keyword.	/ 1
7.	Define and use virtual function.	/ 2
8.	Sufficient comments.	/ 2
9.	Program run successfully without any error.	/ 1
10.	Program is written in well-indented format for easy readability.	/ 1
11.	Program output is neat and nice.	/ 1