# BSc (Hons) in Information Technology
# Year 1

**Lab Sheet 7**

## IT1010 – Introduction to Programming

**Semester 1, 2020**

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**Objectives :**
At the end of this class the students will be able to

- Create a sequential access file to store and retrieve data.
- Store data into a sequential file.
- Retrieve data from a sequential file.

**Exercise 1**
A university needs to maintain a text file to store and retrieve their student's details such as name, class, year and total marks.
1. Write a C program to do the following;

a) Create a file pointer

```
FILE *fPtr;
```

b) Open the file to write data

```
fPtr = fopen ( "Student.dat", "w");
```

c) Input the data of 5 students from the keyboard and store in the file. Write the data to the file using

```
fprintf(fPtr, "%s %c %d %d \n", name, class, year, GPA);
```

d) Modify the program to open the "Student.dat" file you created above and print the data in a tabular form as shown below in the screen.

| Name | Class | Year | GPA |
|---|---|---|---|
| Nimal | 1 | 1 | 3.7 |
| Sunil | 1 | 2 | 4.0 |
| Kamal | 3 | 3 | 2.7 |
| Mihiri | 2 | 1 | 1.7 |
| Mala | 2 | 4 | 2.1 |

**Exercise 2**

Write another program to read the "Studnet.dat" file and display name and GPA of the students in a given year. The user should be able to input the year from the keyboard.