Data Structures and Algorithms

Lab 08 Activity

C2 Batch

Date: 10 Oct 2017

Activity Details: Team Formation

- Form 7 teams

  - Members in each team: [3 to 5]

Undertaking's

- 07 Teams and 07 Undertakings by each team

- Fill up the details and return back the sheet provided to you with:
  - Team Number
  - Team Members Name
  - Roll numbers

[off-course with a small twist]

Undertaking 01

- For the question provided to you, understand and note the **purpose** of the task.

- Make sure your description is
  - Clear
  - Specific
  - Unambiguous
  - Correct
  - Valid
  - Simple
  - Realistic

Undertaking 02

Write the **description** of the task in the form of:

ALGORITHM *Name(Params)*

// Write the purpose here – short description of task

//   carried out

// Input:

// Output:

Undertaking 03

Write an **algorithm** after reading the task description.

Following conventions need to be followed:

- Use ← for assignment
- Use = for comparison
- for loop: for i ← 0 to n-1 do
- while loop: while *condition* do
- Use *return* statement
- Indent the code
- Free to decide on other conventions

Undertaking 04

Identify and write the **Basic Operation**

- What is a Basic Operation?
  - The most important operation of the algorithm
  - Contributes most to the total running time
  - Most time consuming operation
  - One in innermost loop

Undertaking 05

Identify if the algorithm has

- **Best Case**
- **Average Case** and
- **Worst Case** analysis

Or

only one **General** analysis

Undertaking 06

Perform **Efficiency Analysis:**

- Set up a mathematical equation
- Solve the equation
- Comment on the efficiency obtained
- Identify the order of growth
- Write conclusion

Undertaking 07

Task **Implementation**:

- The further implementation details are made available to you in **lab08-c2.pdf**

Thank you.