Tutorial 3 : Control Structures-Decision Making

September 2, 2019

<u>Objective :</u>

- This lab is intended to introduce control structures and decision making in C.

<u>Recommended Systems :</u>

- Any Flavour of Linux - We will be using Ubuntu Systems in the lab 5042

<u>References :</u>

- Unix concepts and applications, Fourth Edition, Sumitabha Das, TMH.
- Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, Prentice Hall of India.
- Byron Gottfried, Schum's Outline of Programming with McGraw-Hill.

<u>Getting Started</u>

- Switch on your monitor.
- Switch on your PC.
- Allow the machine to boot.
- Wait until the log in prompt comes.
- Supply your log-in and password
    - Log in : iiita
    - Password : iiita123
      This opens your window manager (usually GNOME) with icons, the side panel, and so on. You are now ready to start your work
    - Click on the terminal icon to open a shell (command prompt)

<u>Tutorials : Compiling simple C Programs</u>

- Six programs named *prog9.c, prog10.c, prog11.c, prog12.c, prog13.c and prog14.c* have been provided in the *Helpful resources Section* of this lab exercise. Run each of them to know how they work.
- To run each of the *c* files follow the steps given in Tut –0.

- *prog9.c :* Calculate average of the absolute values of two integers. Quits program if one integer is zero.
- *prog10.c :* Checks for leap year using the if-else structure. Doesn't make the check for century.
- *prog11.c :* Computes refund amount on ticket cancellation. Negative value for hours_left is valid. Maximum price of ticket = Rs 10,000.
- *prog12.c :* Validates PIN with USER_PIN and ensures 4 digit PIN is input. Also limits maximum amount to Rs 20,000.
- *prog13.c :* Checks for leap year using nested ifs. This one makes the check for century.
- *prog14.c* : A rudimentary calculator using switch-case. Truncates operands to integers before using the % operator.