



# KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY

## KUET

### SESSIONAL REPORT

Department Of CSE Course No. CSE 1202

Experiment No. 01

Name of the Experiment Steps of C program execution

#### Remarks

Name Pancho Haque

Roll No 1907075

Date of Performance .....

Group No \_\_\_\_\_

Date of Subrnission .....

Year 1st

Semester 2nd

## Objectives:

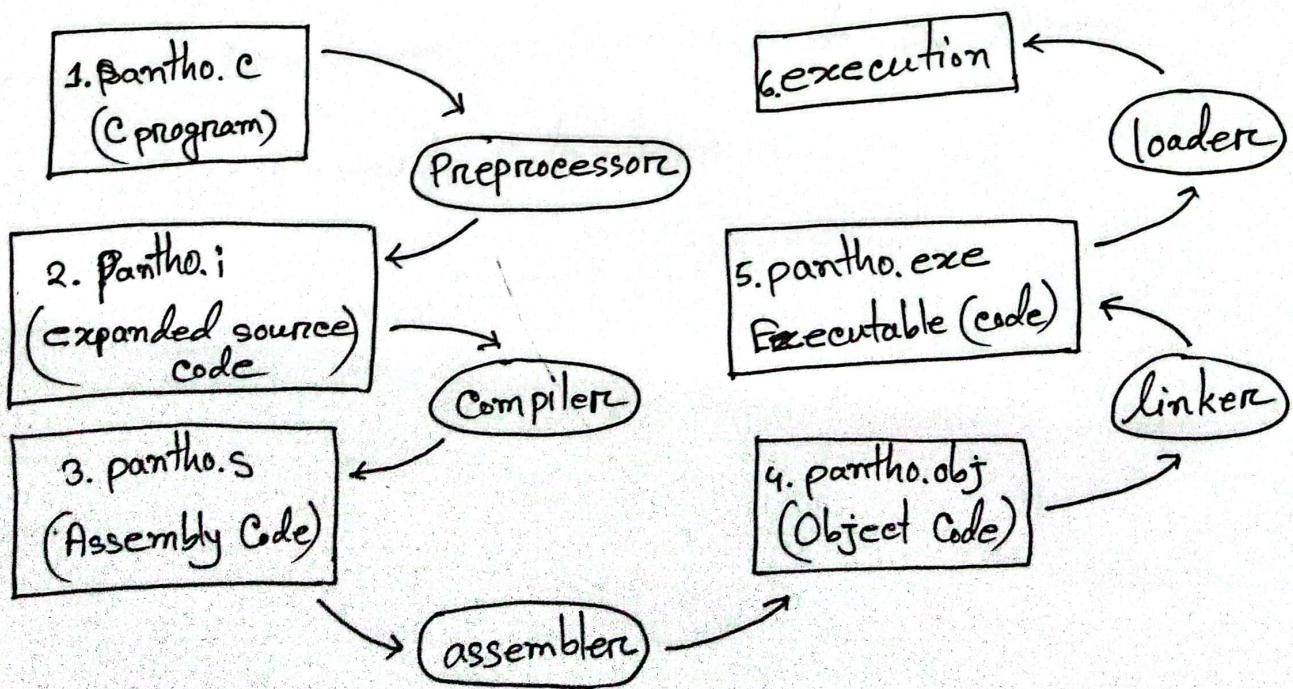
- 1) To know how our code interacts with our machine.
- 2) To make a program with efficient code.
- 3) To learn about the compilation process of C compiler.

## Introduction:

The full execution goes through a procedure. At first our code will converted into a source code of our program. One by one it will be converted into assembly, object and executable code. Then we can load the program on our operating system.

## Topic:

If we make a execution flow of a C file named pantho.c then the execution process will look like this.



## Discussion:

C program is sent to preprocessor first. It converts preprocessor directives into their respective values. Then the code is sent to compiler and convert into assembly code. The ~~assym~~ assembly code is sent to assembler and generates object code. This code is sent to linkers which links it to the library such as header files. Then it is converted into executable code. Loader loads it into memory and then it is executed. After execution output is sent to console.

## Conclusion:

All processes explained above is essential to run a code into our computer. Which is usually completes by gcc compiler. We can use an IDE (Integrated Development Environment) to go through all those process easily. Codeblocks is a popular IDE.



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### SESSIONAL REPORT

Department Of CSE Course No. CSE 1202

Experiment No. 02

Name of the Experiment Data type, Variable declaration & initialization

#### Remarks

Name Pancho Haque

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Expt No. 02

## Objectives:

- 1) To declare a variable properly.
- 2) To initialize a variable properly.
- 3) To learn about data types.

## Introduction:

In case of declaring variables we have to follow some rules, otherwise we can't say this a proper variable. In some cases it may occur a compilation error for improper variable name. We can initialize a variable with proper values. Datatypes is a type of data which tells the computer to allocate a necessary amount of ~~the~~ memory.

## Topic :

### Data type:

There are 3 types of data type,

#### 1) Integer

type	allocated memory (byte)
int	4
Unsigned int	4
long long int	8

## 2) Floating point numbers

Type	allocated memory (byte)
float	4
double	8
long long double	10

## 3) Characters

Type	allocated memory (byte)
char	1

### Variable declaration:

The rules we have to follow during the declaration of a variable are,

- 1) Alphabets (a-z, A-Z), digit, underscore may contain.
- 2) Can't start with digit.
- 3) No special symbol allowed.
- 4) keywords can't be variables.
- 5) Can be name with 32 characters.

### example:

int pantho\_Hague\_75;

Note: We must add proper data type before our variable name.

## Variable initialization:

We can initialize a variable with expected value during declaration.

### example:

```
int pantho_Haque = 1907075;
```

## Discussion:

We must follow the rules of variable naming, otherwise it may occur compilation error. On the other hand, it is a good practice to name a variable meaningful. We also have to initialize variable with the same kind of values we set as data type. If we set a variable as integer type, we must store an integer in this variable.

Conclusion:  
It is necessary to know about data types for assigning and manipulating data in efficient way with less memory. A proper variable name can make other programmers to realize about what this variable does easily. That's why we should learn about the rules of variable naming & declaration.



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### SESSIONAL REPORT

Department Of CSE Course No. CSE 1202

Experiment No. 03

Name of the Experiment Conditional statement

#### Remarks

Date of Performance .....

Date of Subrnission .....

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Group No .....

Year 1st

Semester 2nd

## Objectives:

- 1) To learn how to make decisions in programming.
- 2) To handle one or more condition based execution.
- 3) To learn about manipulating the output under certain condition.

## Introduction:

Conditional statements are used to make decisions based on the condition. It executes sequentially when there is no condition around the statements. If we put some condition for a block of statements, the execution flow may change based on the result evaluated by the condition.

## Topic :

### ① If statement

executes a block of code if the condition is true.

#### example:

```
int num=1;  
if(num==1){  
    printf("The num is 1");  
}
```

output: The num is 1

## (II) If-else statement

executes a block of code depending the condition is true or not.

example :

```
int num=0;
if (num==1){
    printf("The num is 1");
}
else
    printf("The num is not 1");
}
```

Output : The num is not 1

## (III) Else-if ladder

executes a block of code depending which condition is true or no condition is true.

example :

```
int num=-1;
if (num==1){
    printf("The num is 1");
}
else if (num==0){
    printf("The num is 0");
}
else
    printf("The num is unknown");
}
```

Output : The num is unknown

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## 17) switch:

Used to execute a block of code depending on which option is true for the variable given in switch.

### example:

```
int num=2;  
switch(num){  
    case 1:  
        printf("case 1");  
        break;  
    case 2:  
        printf("case 2");  
        break;  
    case 3:  
        printf("case 3");  
        break;  
    default:  
        printf("default");  
}  
}
```

Output: Case 2

### Discussion:

Depending on the number of condition we should apply, we may use if, if-else & else-if ladder. In case of switch code will execute if and only if the key and case values is equivalent. Also we must use break statement in switch statement. otherwise it will execute all block of code after the condition is true once.

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## Conclusion:

Conditional statement helps us to make decision based on certain conditions. These conditions are specified by a set of conditional statements having boolean expressions which are evaluated to a boolean value true or false. Thus it helps us to find out the actual data easily.