**PF THEORY (1st Semester)**

**Lec#01**

#include 🡪 to include any external file to program

<stdio.h> 🡪 stdio = Standard Input Output , .h= header section

int main () { 🡪 int = integer , Any thing written inside curly brackets is convertible for compiler and program

printf(“Hello World”); 🡪 print f = print format, “” = grammatical rules,

; = end of a sentence

return 0 🡪 just to memorize

}// end of the main

**Header Libraries:**

<assert.h> 🡪 Program Assertion Functions

<ctype.h> 🡪Character type Functions

<locate.h> 🡪 Localization Functions

<math.h> 🡪 Mathematic Functions

<sethjpm.h> 🡪 Jump Functions

<signal.h> 🡪 Signal Handling Functions

<stdarg.h> 🡪 Variable Arguments Handling Functions

<stdio.h> 🡪 Standard Input/Output Functions

<stdlib.h> 🡪 Standard Utility Functions

<string.h> 🡪 String Handling Functions

<time.h> 🡪 Date Time Functions

**Lec#02**

**Algorithm:** The solution to any computing problem involves executing a series of actions in a specific order. An algorithm is based upon two things.

1. Step by Step Execution. 2.Natural Languages

**Flowchart:** A flowchart is a graphical representation of an algorithm or of a portion of an algorithm. You can easily draw flowchart with using special purpose symbols such as rectangles, parallelogram, diamonds, rounded rectangles, small circles.

**Start**

**Input**

**Process**

**Output**

**End Task**

**Naming Conventions:** Naming conventions are general rules applied when creating text scripts for software programming.

* CamelCase: structures and classes

Example: MyName

* camelCase: Functions and variables.

Example: myName

* c-style: Variable.

Example: my\_Name

**Datatypes**:

|  |  |  |
| --- | --- | --- |
| **Type** | **Size (bytes)** | **Format Specifier** |
| char: (character) | 1 bytes | %c |
| bool: (boolian) | 1 bytes | %d , %i, %s |
| int: (integer) | 4 bytes | %d , %i |
| long: (integers for long range) | 8 bytes | %ld , %li |
| short: (integers for short range) | 2 bytes | %hd |
| float: (decimal value) | 4 bytes | %f |

* **Variable Declaration:** int apples:
* **Variable Definition:** int apples=10;