**INTRODUCTION**

**Sample C program**

#include<math.h>---------> Pre Processor Directive

#include<string.h>

#include<conio.h>

#include<graphics.h>

#include<stdib.h>

#include<alloc.h>

#include<ctype.h>

main()

{

printf(“Hello World”);

}

Return 0------------------> (in the end of the program, should always be mentioned)

a)1

b)4

c)6

d)460

[Constant float pi=3.41

#define pi 3.141---> ( defining functions by a pre processor directive)]

**Main function**

Q) What is the entry point of c program?

ans) main

--->The execution of c program starts with main function.

Q) can we compile a program without main

ans) yes ,but we cannot execute.

Background files

* First.c- source code
* First.bak- backup file
* First.obj- object file
* First.exe- executable file

Linux/Unix

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cc. First.c ----------- compilation

.a\out ----------------- execution

QUESTIONS

Q) what is the default return

Type in C lang

ans) int

**Data types**

1. Int %d
2. Char %(or)%s
3. Float %f
4. Long int %ld
5. Double %lf

->Specifies the type of value to be stored in the variable.

-> when we store numbers in charac variable ,we cannot to do any arthematic operations but to just print the number we can take character type variable

**TYPE CASTING**- It is a process of converting one data type to another.

1. Explicit
2. Implicit

**Q) to find total and average of given marks**

int main()

{

int m;

int p;

int c;

printf("maths phy chem");

scanf("%d%d%d",&m,&p,&c);

int total;

float avg;

total= m+p+c;

avg=total/3;

printf("total:%d",total);

printf("\navg:%f",avg);

scanf("%d %f",&total, &avg);

return (0);

}

**Control statements**

I-P-O statements to be followed.

1. **Conditional control statement**
2. **If**-----> used to check the condition and executes the statement if true

**Syntax for “if”**

If (condition)

{

Statements..

}

1. **Else**---> 2 choices then used

**Syntax for “if else”**

if(condition)

{

Statements..

}

Else

{

Statements..

}

1. **elseif**----> when we have three or more choices

if(condition)

{

Statements..

}

Elseif( condition 2)

{

Statements..

}

Else

{

Statements..

}

**2. Case control statement**

1. **Switch**

**Operators in C**

* Arthematic Operators

+

-

%

/

* Relational operators

>=

<=

==

>

<

!=

= (assignment operator)

**Q) Swapping values with third variable**

#include <stdio.h>

int main()

{

int a,b,c;

printf("enter two valuues:%d%d",a,b);

scanf("%d%d",&a,&b);

printf("\n before swap a=%d \t b=%d",a,b);

c=a;

a=b;

b=c;

printf("\n after swap a=%d \t b=%d",a,b);

return(0);

}

**Q)Swapping variables without using third variables**

#include <stdio.h>

int main()

{

int a,b,c;

printf("enter two valuues:%d%d",a,b);

scanf("%d%d",&a,&b);

printf("\n before swap a=%d \t b=%d",a,b);

a=a+b;

b=a-b;

a=a-b;

printf("\n after swap a=%d \t b=%d",a,b);

return(0);

}

**Escape sequences**

\n -new line

\f - new tab

\a - alert

\b -back space

\\ -\

\” - double quotes

\’ - single quotes

**Q) to print hello world in double quotes and single quotes**

#include <stdio.h>

int main()

{

printf("\"hello world\"");

printf("\'GITAM COLLEGE\'");

return(0);

}

**Q) if number is even or odd**

#include <stdio.h>

int main()

{

int n;

printf("\n enter a number:");

scanf("%d",&n);

if(n%2==0)

{

printf("\n %deven");

}

if(n%2!=0)

{

printf("\n %dodd");

}

return(0);

}

**Q) if number is positive or negative**

#include <stdio.h>

int main()

{

int n;

printf("\n enter a number:");

scanf("%d",&n);

if(n>0)

{

printf("\n %d positive");

}

else

{

printf("\n %d negative");

}

return(0);

}

TERNARY OPERATORS (?:)

Q) program using ternary operators

#include <stdio.h>

int main()

{

int n;

printf("\n enter a number:");

scanf("%d",&n);

printf(n%2==0 ? "even");

return(0);

}