

Assignment  
Programming in - C  
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Section : "A"

Program : BCSE

Course Name : Programming in - c (Lab)

Course Code : CSC (184)

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## Chapter 6

1a/

```
#include <stdio.h>
main()
{
    int x;
    printf ("Enter an integer number: ");
    scanf ("%d", &x);
    if (x%2 == 0)
        printf ("The number entered is even");
    else
        printf ("The number entered is odd");
}
```

1b/

```
#include <stdio.h>
main()
{
    int x;
    printf ("Enter an integer number: ");
    scanf ("%d", &x);
    if (x%2 == 0)
    {
        printf ("The number entered is even");
        exit(0);
    }
    printf ("The number entered is odd");
}
```

2/

```
#include <stdio.h>
```

```
main()
```

```
{
```

```
    int i, sum;
```

```
    sum = 0;
```

```
    for (i = 101; i <= 199; i++)
```

```
{
```

```
    if (i % 7 == 0)
```

```
{
```

```
        printf ("%d\n", i);
```

```
        sum = sum + i;
```

```
}
```

```
}
```

```
    printf ("Summation is = %d", sum);
```

```
}
```

5/ #include <stdio.h>

main()

{

int Maths, Phy, Chem, Total, Total-MP;

printf ("Enter the marks of maths = ");

scanf ("%d", &Maths);

printf ("Enter the marks of phy = ");

scanf ("%d", &Phy);

printf ("Enter the marks of chem = ");

scanf ("%d", &Chem);

Total = Maths + Phy + Chem;

Total-MP = Maths + Phy ;

if (Maths >= 60 && Phy >= 50 && Chem >= 40)

{

if (Total >= 200 || Total-MP >= 150)

{

printf ("The candidate is eligible for admission");

}

else

{

printf ("The candidate is not eligible for admission");

}

}

?

7a/

```
#include <stdio.h>
main()
{
    int i, j, sum;
    sum = 0;

    for (i=1; i<=13; i++)
    {
        for (j=1; j<=i; j++)
        {
            sum = sum + 1;
            printf ("%d\t", sum);
        }
        printf ("\n");
    }
}
```

7b/

```
#include <stdio.h>
main()
{
    int i, j;

    for (i=1; i<=5; i++)
    {
        for (j=1; j<=i; j++)
        {
            if (i == 1)
            {
                printf ("1");
            }
            else
```

(3)

```
else
{
    if (i % 2 == 0)
        {
            if (j % 2 == 0)
                printf ("1")
            else
                printf ("0");
        }
    else
        {
            if (j % 2 == 0)
                printf ("0");
            else
                printf ("1");
        }
    printf ("%c", i);
}
```

```
9a) #include <stdio.h>
Void main()
{
    int y;
    float n;
    printf ("Enter the value of n: ");
    scanf ("%f", &n);
    if (n>0)
    {
        y=1;
        printf ("The value of y for the given value of
n=%f is %d\n", n, y);
    }
    else if (n==0)
    {
        y=0;
        printf ("The value of y for the given value of
n=%f is %d\n", n, y);
    }
    else
    {
        y=-1;
        printf ("The value of y for the given value of
n=%f is %d\n", n, y);
    }
}
```

Qb/

#include &lt;stdio.h&gt;

main()

{

int y;

float n;

printf ("Enter the value of n : ");

scanf ("%f", &amp;n);

if (n &gt; 0)

{

y = 1;

printf ("The value of y for the given value

of n = %f is %d\n", n, y);

}

else

{

if (n == 0)

{

y = 0;

printf ("The value of y for the given value of

n = %f is %d\n", n, y);

}

else

{

y = -1;

printf ("The value of y for the given value of

n = %f is %d\n", n, y);

}

}

{

```

10./ #include <stdio.h>
main()
{
    float a, b, c, d, n1, n2, n;
    printf ("Enter the value of a : ");
    scanf ("%f", &a);
    printf ("Enter the value of b : ");
    scanf ("%f", &b);
    printf ("Enter the value of c : ");
    scanf ("%f", &c);
    d = (b * b) - (4 * a * c);
    if (a == 0 && b == 0)
        printf ("There is no solution of the quadratic
equation");
    else if (a == 0)
    {
        n = -c / b;
        printf ("There is only one root of the
equation, n=%f", n);
    }
    else if (d < 0)
    {
        printf ("The roots are imaginary and as
follows: \n");
    }
    else
    {
        n1 = (-b + sqrt(d)) / (2 * a);
        n2 = (-b - sqrt(d)) / (2 * a);
        printf ("The roots are real \n");
        printf ("n1=%f \n n2=%f", n1, n2);
    }
}

```

11./ #include <stdio.h>

```

main()
{
    float Length, Height, Hypotenuse;
    float Temp1, Temp2;
    printf ("Enter Length Height and Hypotenuse of
            Triangle:-\n");
    scanf ("%f %f %f", &Length, &Height, &Hypotenuse);
    Temp1 = Hypotenuse * Hypotenuse;
    Temp2 = Length * Length + Height * Height;
    if (Temp1 == Temp2)
        printf ("Triangle is Right Angle Triangle\n");
    else
        printf ("Triangle is not a Right Angle Triangle\n");
}

```

12./ #include <stdio.h>

```

main()
{
    int units;
    char Name [23];
    float charge;
    printf ("Enter Name of user:-\n");
    scanf ("%s", &Name);
    printf ("Enter Total units Consumed:-\n");
    scanf ("%d", &units);
}

```

```

if (units >= 0 && units <= 200)
    Charge = 100 + (units * 0.80);
else if (units > 200 && units <= 300)
    charge = 100 + (units * 0.90);
else if (units > 300 && units <= 400)
    Charge = 100 + units;
else
    Charge = (100 + units) + (100 + units) * 15;
printf("Name    Units    Charge \n");
printf("%s      %d      %.2f", Name, Units, Charge);
}

```

13/ # include < stdio.h>

void main()

{

int i, sum, count;

sum = Count = 0;

i = 0;

Loop:

if ((i % 6 == 0) && (i % 4 != 0))

{

printf ("%d \n", i);

Count = Count + 1;

sum = sum + i;

}

```

i = i + 1;
if (i <= 100)
    goto loop;
printf ("Sum of Numbers is %d\n", sum);
printf ("Count of Numbers is %d\n", count);
}

```

14/ #include <stdio.h>

```

main()
{
    int Num, i, Count, Temp;
    Count = 0;
    i = 2;
    printf ("Enter A Number :--\n");
    scanf ("%d", &Num);

Loop:
    Temp = Num % i;
    if (Temp == 0)
        Count = Count + 1;
    i = i + 1;
    if (i <= Num)
        goto Loop;
    if (Count == 1)
        printf ("Number %d is prime", Num);
    else
        printf ("Number %d is Not prime", Num);
}

```



15/

```
#include <stdio.h>
```

```
main()
```

```
{
```

```
double x, Val;
```

```
char T;
```

```
Val = 0;
```

```
printf ("Enter Angle: --\n");
```

```
scanf ("%f", &x);
```

```
printf ("\ns or s store Sin (x)");
```

```
printf ("\nc or c store Cos (x)");
```

```
printf ("\nt or t store Tan (x)");
```

```
printf ("\nEnter choice\n");
```

```
T = getch();
```

```
if ((T == 's') || (T == 'S'))
```

```
Val = sin (x);
```

```
else if ((T == 'c') || (T == 'C'))
```

```
Val = cos (x);
```

```
else if ((T == 't') || (T == 'T'))
```

```
Val = tan (x);
```

```
else
```

```
printf ("\nWrong Input\n");
```

```
printf ("Value: --- %f", Val);
```

```
}
```

16/ # include <stdio.h>  
main()

{  
char \* WEEKS [] = { "Monday", "Tuesday", "Wednesday",  
"Thursday", "Friday", "Saturday",  
"Sunday" };

int week;

printf ("Enter week number (1-7) : ");

scanf ("%d", &week);

if (week > 0 & week < 8)

{  
printf ("%s", WEEKS [Week-1]);

}

else

{  
printf ("Invalid input! Please enter week  
number between 1-7.");

}

}

(Valid input should display something like

(Invalid input should display something like

(Invalid input should display something like

17/ #include <stdio.h>  
main()  
{  
float a, b;  
printf ("Input the values for a and b : ");  
scanf ("%f %f", &a, &b);  
if (a==b)  
printf ("a and b are equal\n");  
else if (a>b)  
printf ("a greater than b\n");  
else if (a<b)  
printf ("b greater than a\n");  
}

18/ #include <stdio.h>  
main()  
{  
int num;  
printf ("Enter your mark ");  
scanf ("%d", &num);  
if (num >= 80)  
{ printf ("In The Grade is = First Division");  
}  
else if (num >= 60)  
{ printf ("In The Grade is = second Division");  
}  
else if (num < 60)  
{ printf ("In The Grade is = Third Division");  
}  
}

19/ #include <stdio.h>

main()

{

int month;

printf("Enter month number (1-12): ");

scanf("%d", &month);

switch (month)

{

case 1:

printf("January :- 31 days");

break;

case 2:

printf("February :- 28/29 days");

break;

Case 3:

printf("March :- 31 days");

break;

Case 4:

printf("April :- 30 days");

break;

Case 5:

printf("May :- 31 days");

break;

Case 6:

printf("June :- 30 days");

break;

Case 7:

printf("July :- 31 days");

break;

Case 8:

printf("August :- 31 days");

break;

Case 9:  
    printf ("September :- 30 days");  
    break;

Case 10:  
    printf ("October :- 31 days");  
    break;

Case 11:  
    printf ("November :- 30 days");  
    break;

Case 12:  
    printf ("December :- 31 days");  
    break;

default:  
    printf ("Invalid input! Please enter(1-12)");

}

20/ #include <stdio.h>

main()

{

int i;

int upper=0, lower=0;

char ch [100];  
printf ("Enter the string: \n");

gets (ch);

for (i=0; ch[i] != '\0'; i++)

{ if (ch[i] >='A' && ch[i] <='Z')

{ upper++; }

else if (ch[i] >='a' && ch[i] <='z')

{ lower++; }

}

printf ("Lowercase letters: %d", lower);

printf ("\n Uppercase letters: %d", upper);

}

Chapter '7'

---

1/ #include <stdio.h>

main()

{

long int Num, Temp, RevNum, Dig;  
printf ("Enter any Number :- \n");  
scanf ("%d", &Num);

Temp = Num;

RevNum = 0;

while (Temp != 0)

{

Dig = Temp % 10;

Temp = Temp / 10;

RevNum = (RevNum \* 10) + Dig;

}

printf ("Reverse of Number %d is %d \n", Num, RevNum);

}

2/ #include <stdio.h>

main()

{

long int Num, Temp, Sum, Dig;

printf ("Enter any Number :- \n");

scanf ("%d", &Num);

Temp = Num;

Sum = 0;

```
while (Temp!=0)
```

```
{
```

```
    Dig = Temp % 10;
```

```
    Temp = Temp / 10;
```

```
    sum = sum + Dig;
```

```
}
```

```
printf ("sum of number %d is %d\n", Num, sum);
```

```
}
```

```
3/ #include <stdio.h>
```

```
main()
```

```
{
```

```
int m, i, Fib1, Fib2, Fib;
```

```
printf ("Enter Length of series:-\n");
```

```
scanf ("%d", &m);
```

```
Fib1 = 0;
```

```
Fib2 = i = 1;
```

```
printf ("Fibonacci Numbers ->\n");
```

```
if (m>1)
```

```
{
```

```
    printf ("%d ", Fib2);
```

```
}
```

```
do
```

```
{
```

```
    Fib = Fib + Fib2;
```

```
    Fib1 = Fib2;
```

```
    Fib2 = Fib;
```

```
    i = i+1;
```

```
    printf ("%d ", Fib);
```

```
}
```

```
while (i<=m-1);
```

```
}
```

4/ #include <stdio.h>

main()

{

int p, n;

float v, r, temp;

printf ("For P:-- %d\n", P);

for (n=0; n<= 0.15; n+= 0.01)

{

printf ("For Rate %f\n", r);

printf ("n v");

for (n=1; n<= 5; n++)

{

printf ("%d", n);

temp = pow ((1+r), n);

v= p\*temp;

printf ("%f", v);

}

}

printf ("ln n= %f; n= %d n to power n=%f\n");

}

5/ #include <stdio.h>

main()

{ int i, j;

for (i=1; i<=5; i++)

{ for (j=1; j<=i; j++)

{ printf ("%d", i);

}

printf ("\n");

}

}

5 b/ #include <stdio.h>

main()

{

int i, j, k;

for (i=5; i>=1; i--)

{

for (k=5; k>i; k--)

printf (" " );

for (j=1; j<=i; j++)

{ printf ("\*");

} printf ("\n");

}

}

6/ # include <stdio.h>

main()

{

int i, age, c=0;

for (i=1; i<=10; i++)

{ printf ("Enter the age of the person %d : ", i);

scanf ("%d", &age);

if (age >= 50 && age <= 60)

c=c+1;

}

printf ("The number of persons in the age  
group 50 to 60 are : %d ", c);

}

8/ #include <stdio.h>

main()

{

float Ex, sum, i, j;

printf ("n");

for (j = 0.1; j <= 0.5; j += 0.1)

printf ("%f", j);

printf ("\n");

for (i = 1; i <= 5; i++)

{

printf ("%d", i);

for (j = 0.1; j <= 0.5; j += 0.1)

{

sum = i + j;

Ex = exp (sum);

printf ("%f", Ex);

}

printf ("\n");

}

}

main()

{

int i, j, k;

j = 1;

for (i = 1; i <= 3; i++)

for (j = 1; j <= 18; j++)

{ printf (\*);

if (j == 18)

printf ("\n");

}

```
for (i=1; i<=3; i++)
```

```
    for (j=1; j<=4; j++)
```

```
{     printf ("*");
```

```
    if (j==4)
```

```
        printf ("\n");
```

```
}
```

```
for (i=1; i<=3; i++)
```

```
    for (j=1; j<=4; j++)
```

```
{     printf ("*");
```

```
    if (j==4)
```

```
        printf ("\n");
```

```
}
```

```
for (i=1; i<=3; i++)
```

```
    for (j=1; j<=18; j++)
```

```
{     printf ("*");
```

```
    if (j==18)
```

```
        printf ("\n");
```

```
}
```

```
for (i=1; i<=3; i++)
```

```
{     for (k=1; k<=18; k++)
```

```
        printf (" ");
```

```
    for (j=15; j<=18; j++)
```

```
{     printf ("*");
```

```
    if (j==18)
```

```
        printf ("\n");
```

```
}
```

```
}
```

`for (i = i; i <= 3; i++)`  
`for (j = 1; j <= 18; j++)`

{ `printf ("\\n");`

if (`j == 18`)

`printf ("\\n");`

}

}

10/ `#include <stdio.h>`

`main()`

{

`float i, n;`

`float e1, e2;`

`printf ("Enter No.");`

`scanf ("%f", &n);`

`e2 = 1;`

`e1 = 1;`

`for (i = 1; i <= n; i++)`

{

`e1 = e1 + ((float) 1 / fact(i));`

`if ((e1 - e2) < 0.00001)`

`break;`

`e2 = e1;`

}

`printf ("The value of e is : %f", e1);`

}

13a) #include <stdio.h>

main()

{

int j,i;

for (i=1; i<=5; i++)

{

for (j=1; j<=5; j++)

printf ("s");

printf ("\n");

}

}

13b) #include <stdio.h>

main()

{

int j,i,k;

for (i=1; i<=5; i++)

printf ("s");

for (j=1; j<=5; j++)

printf ("\tss");

}

~~for~~

printf ("\n");

for (i=1; i<=5; i++)

printf ("s");

}

14/ #include <stdio.h>

main()

{

float y;

int n, i;

printf ("x sin (n)\n");

for (i = 0; i <= 180; i += 15)

{

y = sin (n);

printf ("%d %f\n", n, y);

}

}

20/ #include <stdio.h>

main()

{

int i, j;

for (i = 1; i <= 4; i++)

{

for (j = 1; j <= i; j++)

{

if (i == 1)

{ printf ("1");

}

```
else
{
    if ( $i \% 2 == 0$ )
    {
        if ( $i \% 2 == 0$ )
            printf ("1");
        else
            printf ("0");
    }
    else
    {
        if ( $i \% 2 == 0$ )
            printf ("0");
        else
            printf ("1");
    }
}
printf ("\n");
}
```