

Notification:

I use Borland Turbo C as my compiler for my programming practice.

Program # 01

Program's objective: To calculate two values by adding each other.

Solution code by: Mizanur Rahaman Mizan.

Program name: ADD.C

Source Code

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

void main()
{
    int a,b,c;
    clrscr();
    printf("\n\nPut first value:\n");
    scanf("%d",&a);
    printf("\nPut second value:\n");
    scanf("%d",&b);
    printf("The Result is:\n");
    c=a+b;
    printf("%d",c);
    getch();
}
```

Output:

Put first value:

2

Put Second value:

10

The Result is:

12

8 8 8

Program # 02

Program's objective: To investigate whether the inputted character is small or capital letter or not.

Solution code by: Mizanur Rahaman Mizan

Program name: LETTER.C

Source Code

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

void main()
{
    char ch;
    clrscr();
    textcolor(GREEN);
    printf("\n\n\n\n\n\n\nPut down a character:\n");
    scanf("%c", &ch);
    printf("result:\n");
    if ( (ch>='A') && (ch<='Z') )
        printf("You have entered a Capital letter.\n");
    else
        if ( (ch>='a') && (ch<='z') )
            printf("You have entered a small letter.\n");
        else
            {
                printf("You have not entered a character.\n");
            }
    cprintf("\n\n\nThanks for trying this program.");
    getch();
}
```

Output

Put Down a Character:

A

Result:

You have entered a Capital letter.

Thanks for trying this program.

8 8 8

Program # 03

Program's objective: To show some message based on anyone's age (Using if statement).

Solution code by: Sir Mr. Md. Shahedul Islam(Lecture work) .

Program name: BORN.C

Source Code

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

void main()
{
    int age;
    clrscr();
    textcolor(RED);
    printf("\n\nPlease put your age below:\n");
    scanf("%d",&age);
    printf("Result:\n");
    if (age<0)
    printf("You have not born yet , you are knocking the door of world");
    if ( (age>0)&&(age<12) )
    printf("You are a child.");
    if ( (age>12)&&(age<19) )
    printf("You are a teenager. ");
    if ( (age>=19)&&(age<=40) )
    printf("You are a young person.");
    if (age>40)
    cprintf("Wishing you a better future.");
    getch();
}
```

Output

Please put your age below:

75

Result:

Wishing you a better future.

8 8 8

Program # 04

Program's objective: To show 3 matches average run of a batsman.

Solution code by: Mohammad Tarek.

Modified code by: Mizanur Rahaman Mizan.

Program name: AVERUN.C

Source Code

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

void main()
{
    char name[20];
    float m1,m2,m3,avg;
    clrscr();
    printf("\n\nInsert a batsman name:\n");
    scanf("%[^\\n]",name);
    printf("Put first ODI Score:\n");
    scanf("%f",&m1);
    printf("Put second ODI Score:\n");
    scanf("%f",&m2);
    printf("Put third ODI Score:\n");
    scanf("%f",&m3);
    printf("The data you inserted and the Result are:\n");
    avg=(m1+m2+m3)/3;
    printf("\nName:%s\n\n",name);
    printf("\tMatch1:%.2f\n",m1);
    printf("\tMatch2:%.2f\n",m2);
    printf("\tMatch3:%.2f\n",m3);
    printf("\tAverage:%.2f\n\n",avg);
    getch();
}
```

Output

Insert a batsman name:

Mohammad Ashraful

Put first ODI Score:

156

Put second ODI Score:

162

Put third ODI Score:

95

The data you inserted and the Result are:

Name: Mohammad Ashraful

Match1: 156

Match2: 162

Match3: 95

Average: 137.67(With a Beep sound)

Program # 05

Program's objective: To show whether inserted character is digit / small/ capital letter or not.

Solution code by: Sir Mr. Md. Shahedul Islam (Lab work).

Program name: DIGIT.C

Source Code

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

void main()
{
    char ch;
    clrscr();
    printf("Put a Character:\n");
    scanf("%c",&ch);
    printf("Result:\n");
    {
        if((ch>='A')&&(ch<='Z'))
            printf("You have entered a Capital letter.");
        else
            if((ch>='a')&&(ch<='z'))
                printf("You have entered a Small letter.");
            else
                if((ch>='0')&&(ch<='9')||(ch<='0'))
                    printf("You have entered a digit.");
                else
                    printf("You have entered Odd character.");
            }
    getch();
}
```

Output

Put a character:

A

Result:

You have entered a Capital letter.

Program # 06

Program's objective: To show result in grade (Using if-else statement).

Theme given by: Sir Mr. Md. Shahedul Islam.

Solution code by: Mizanur Rahaman (Lab work).

Program name: GRADE.C

Source Code

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

void main()
{
    int number;
    clrscr();
    textcolor(RED);
    printf("\n\nPlease put your number:\n");
    scanf("%d",&number);
    printf("Your result is:\n");
    {
    if( (number>=0)&&(number<40) )
    cprintf("F Grade");
    else
    if( (number>=40)&&(number<=45) )
    cprintf("D Grade");
    else
    if( (number>=46)&&(number<=50) )
    cprintf("C Grade");
    else
    if( (number>=51)&&(number<=55) )
    cprintf("C+ Grade");
    else
    if( (number>=56)&&(number<=60) )
    cprintf("B- Grade");
    else
    if( (number>=61)&&(number<=65) )
    cprintf("B Grade");
    else
    if( (number>=66)&&(number<=70) )
    cprintf("B+ Grade");
    else
    if( (number>=71)&&(number<=75) )
    cprintf("A- Grade");
    else
    if( (number>=76)&&(number<80) )
    cprintf("A Grade");
    else
    if( (number>=80)&&(number<=100) )
```

```

        cprintf(" Congratulation, you secure A+ Grade");
        else
        cprintf("No result in our database because you are too much good than our
expectation.
\a");
    }
    getch();
}

```

Output

Please put your number:

99

Your result is:

Congratulation, you secure A+ Grade

Or

Please put your number:

101

Your result is:

**No result in our database because you are too much good than our expectation.
(With a beep sound)**

8 8 8

Program # 07

**Program's objective: To show whether the inserted year is a leap year or not
(Using if-else statement).**

Theme given by: Sir Mr. Md. Shahedul Islam.

Solution code by: Mizanur Rahaman (Lab work).

Program name: LEAPYEAR.C

Source Code

```

#include<stdio.h>
#include<conio.h>

void main()
{
    int year;
    clrscr();
    textcolor(RED);
    printf("\n\n\n\n\n\nPlease put down the year:\n");
    scanf("%d",&year);
    printf("Result is:\n\a");
    if( (year%4==0)&&(year%100!=0)|| (year%400)==0 ) )
    printf("You have entered a leap year.");
    else
    cprintf("You don't entered a leap year.\a");
    getch();
}

```

Output

Please put down the year:

1995

Result is:

You don't entered a leap year.

8 8 8

Program # 08

Program's objective: To show large value of three given value (Using if-else statement).

Theme given by: Sir Mr. Md. Shahedul Islam.

Solution code by: Mizanur Rahaman (Lab work).

Program name: LARGE.C

Source Code

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

void main()
{
    int a,b,c;
    clrscr();
    printf("\n\n\n\n\nPut your first value:\n");
    scanf("%d", &a);
    printf("Put your second value:\n");
    scanf("%d", &b);
    printf("Put your third value:\n");
    scanf("%d", &c);
    printf("the result is:\n");
    if ( (a>b)&&(a>c) )
        printf("%d",a);
    else
        if ( (b>a)&&(b>c) )
            printf("%d",b);
        else
            printf("%d",c);
    getch();
}
```

Output

Put your first value:

55

Put your second value:

60

Put your third value:

100

The Result is:

100

Program # 09

Program's objective: To show inserted character as vowel/consonant/digit (Using if-else statement).

Theme given by: Sir Mr. Md. Shahedul Islam.

Solution code by: Mizanur Rahaman (Lab work).

Program name: CVOWEL.C

Source Code

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

void main()
{
    char ch;
    clrscr();
    printf("\n\n\n\nPut a character:\n");
    scanf("%c",&ch);
    printf("Result:\n");
    {
        if( ( (ch=='a')||(ch=='e')||(ch=='i')||(ch=='o')||(ch=='u') )||(
(ch=='A')||(ch=='E')||(ch=='I')||(ch=='O')||(ch=='U') ) )
            printf("The letter you inputted is vowel.");
        else
            if ( ( (ch>='0')&&(ch<='9')||(ch<'0') )
&&((ch!='.')&&(ch!='/')&&(ch!='!')&&(ch!='#')&&(ch!='$')&&(ch!='
')&&(ch!='
')&&(ch!='\')&&(ch!='&')) )
                printf("The letter you inputted is digit.");
            else
                if( (
((ch>'a')&&(ch<'e'))||((ch>'e')&&(ch<'i'))||((ch>'i')&&(ch<'o'))||((ch>'o')&&(ch<'u'))
||((ch>'u')&&(ch<='z')) )||(
((ch>'A')&&(ch<'E'))||((ch>'E')&&(ch<'I'))||((ch>'I')&&(ch<'O'))||((ch>'O')&&(ch<'U'
)) ||((ch>'U')&&(ch<='Z')) ) )
                    printf("The letter you inputted is consonant.");
                else
                    printf("others");
            }
        getch();
    }
}
```

Output

Put a character:

A

Result:

The letter you inputted is vowel.

8 8 8

Program # 10

Program's objective: To Square Root of a number (Using Library function Math).

Theme given by: Sukanto Paul.

Solution code by: Sukanto Paul along with Mizan & Tarek (Lab work).

Program name: SQRT.C

Source Code

```
#include<stdio.h>
#include<conio.h>
#include<math.h>
void main()
{
    int a;
    float b;
    clrscr();
    printf("Put desired number below:\n");
    scanf("%d",&a);
    printf("Result:\n");
    b=sqrt(a);
    printf("%.2f",b);
    getch();
}
```

Output

Put desired number below:

144

Result:

12

8 8 8

Program # 11

Program's objective: To convert centigrade value to Fahrenheit.

Theme given by: Mizanur Rahaman Mizan.

Solution code by: Mizanur Rahaman Mizan

Program name: CELFARN.C

Source Code

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

void main()
{
    float cent, farn;
    clrscr();
    printf("\n\nEnter temperature in centigrade:\n");
    scanf("%f",&cent);
    farn=1.8*cent+32;
    printf("\nFahrenheit value is :\n%.2f",farn);
    getch();
}
```

Output

Enter Temperature in centigrade:

100

Fahrenheit value is:

212.00

Program # 12

Program's objective: To make a Pyramid of number.

Theme given by: Mr. Md. Shahedul Islam Sir.

Solution code by: Mr. Md. Shahedul Islam Sir.

Program name: MRM.CPP

Source Code

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

void main()
{
    int k,i,j,ns,n;
    clrscr();
    printf("Give the line numbers:\n");
    scanf("%d",&n);
    ns=115;
    for(i=0;i<=n;i++,--ns)
    {
        for(k=0;k<ns;k=k+1)
        {
            printf(" ");
        }
        for(j=i;j>=1;j--)
        {
            printf("%d",j);
        }
        for(j=1;j<=i;j++)
        {
            printf("%d",j);
        }
        printf("\n");
    }
    getch();
}
```

Output

Give the line numbers:

4

```
    11
   2112
  321123
432111234
```

Program # 13

Program's objective: Printing a string backward (Using Recursive Function) .

Theme given by: Mr. Md. Shahedul Islam Sir.

Solution code by: Mizanur Rahaman Mizan.

Program name: BACKRE.C

Source Code

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

void back(void)
{
    char ch;

    {
        if((ch= getchar())!=='\n')
            back();
        putchar(ch);
    }
}

int main(void)
{
    clrscr();
    textcolor(GREEN);
    printf("type a line:\n");
    back();
    cprintf("\n\n\n\nThe backward line is been printed.\a");
    getch();
    return 0 ;
}
```

Output

Type a line:

Mizanur Rahaman Mizan

naziM namahaR runaziM

The backward line is been printed. (With a beep sound)

Program # 14

Program's objective: Printing Fibonacci Series (Using control statement) .

Theme given by: Mr. Md. Shahedul Islam Sir.

Solution code by: Mizanur Rahaman Mizan.

Program name: MRFIB.C

Source Code

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int i,n,F1,F2,Fn;
    clrscr();
    printf("Fibonacci number  :\n");
    scanf("%d",&n);
    F1=1;
    F2=1;
    for(i=3;i<=n;++i)
    {
        Fn=F1+F2;
        F2=F1;
        F1=Fn;
    }
    printf("Fibonacci value is:\n=%d",Fn);
    getch();
}
```

Output

Fibonacci number :

7

Fibonacci value is:

13

8 8 8

Program # 15

Program's objective: Printing Fibonacci Series (Using Recursive Function) .

Theme given by: Mr. Md. Shahedul Islam Sir.

Solution code by: Mizanur Rahaman Mizan.

Program name: MRFIB.CPP

Source Code

```
#include<stdio.h>
#include<conio.h>
int fib(int m);
void main()
{
    int i,Fn,n;
    clrscr();
    printf("Fibonacci number  :\n");
    scanf("%d",&n);
    Fn=fib(n);
    printf("Fibonacci value is:\n=%d",Fn);
    getch();
}
int fib(int n)
{
    int i,F1,F2,Fn;
    F1=1;
    F2=1;
    for(i=3;i<=n;++i)
    {
        Fn=F1+F2;
        F2=F1;
        F1=Fn;
    }
    return(Fn);
}
```

Output

Fibonacci number :

7

Fibonacci value is:

13

8 8 8

Program # 16

Program's objective: To make a Pyramid of number.

Theme given by: Mr. Md. Shahedul Islam Sir.

Solution code by: Mizanur Rahaman Mizan.

Program name: PYRAMID.C

Source Code

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

void main()
{
    int a,b,m,n;
    clrscr();
    printf("\n\nHow many lines:\n");
    scanf("%d",&n);
    printf("\n\n");
    for(a=1;a<=n;a++)
    {
        for(b=1;b<=(n-a);b++)
            printf(" ");
        m=a;
        for(b=1;b<=a;b++)
            printf("%2d",m++);
        m-=2;
        for(b=1;b<a;b++)
            printf("%2d",m--);
        printf("\n");
    }
    getch();
}
```

Output

How many lines:

4

```

  1
 232
32532
4567654
```


Program # 17

Program's objective: To calculate the area of a circle.

Theme given by: Programming Book.

Solution code by: Mizanur Rahaman Mizan.

Program name: AREA.C

Source Code

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

void main()
{
    float area,radius,pi;
    char ch;
    clrscr();
    pi=3.14159;
    printf("Do u want to calculate area?(Y/N): ");
    ch=getch();
    ch=toupper(ch);
    while(ch!='N')
    {
        clrscr();
        printf("\nWhat is your radius?:");
        scanf("%f",&radius);
        area=pi*radius*radius;
        printf("\n\nArea of a circle is : %.2f",area);
        printf("\n\n Do u want to calculate area?:(Y/N):");
        ch=getch();
        ch=toupper(ch);
    }
}
```

Output

Do u want to calculate area?:(Y/N):y

What is your radius: 5

Area of circle is: 78.54

Do u want to calculate area?:(Y/N):n

Program # 18

Program's objective: To convert minute into second.

Theme given by: Mizanur Rahaman Mizan.

Solution code by: Tarek.

Program name: SECOND.C

Source Code

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

void main()
{
    int a,b,c;
    clrscr();
    textcolor(RED);
    cprintf("It is a software which calculates minute along with second, into
second.\n");
    printf("\nPut minute:\n");
    scanf("%d",&a);
    printf("Put second:\n");
    scanf("%d",&c);
    cprintf("\aThe result in second is:");
    b=a*60+c;
    printf("\n%d", b);
    getch();
}
```

Output

It is a software which calculates minute along with second, into second.

Put minute:

1

Put second:

59

The result in second is: 119

8 8 8

Program # 19

Program's objective: To convert hour, minute, second into second.

Theme given by: Mizanur Rahaman Mizan.

Solution code by: Sukanto Paul.

Program name: SUKANTO.C

Source Code

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int a,b,c,d;
    clrscr();
    printf("put hour a: \n");
    scanf("%d",&a);
    printf("put minute b:\n");
    scanf("%d",&b);
    printf("put second c:\n");
    scanf("%d",&c);
    d=a*60*60+b*60+c;
    printf("\aAnswer is:\n%d",d);
    getch();
}
```

Output

put hour a:

1

put minute b:

2

put second c:

0

Answer is:

3720

8 8 8

Program # 20

Program's objective: To make a Pyramid of number.

Theme given by: Mr. Md. Shahedul Islam Sir.

Solution code by: Mizanur Rahaman Mizan.

Program name: MRM.C

Source Code

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

void main()
{
    int k,i,j,ns,n;
    clrscr();
    scanf("%d",&n);
    ns=115;
    for(i=1;i<=n;i++,--ns)
    {
        for(k=0;k<ns;k=k+1)
        {
            printf(" ");
        }
        for(j=i;j>=1;j--)
        {
            printf("%d",j);
        }
        for(j=2;j<=i;j++)
        {
            printf("%d",j);
        }
        printf("\n");
    }
    getch();
}
```

Output

Give the line numbers:

4

```
1
212
32123
4321234
```

Program # 21

Program's objective: To show a written line in green color.

Theme given by: Mizanur Rahaman Mizan.

Solution code by: Mizanur Rahaman Mizan.

Program name: GREEN.C

Source Code

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
#include<ctype.h>

void main()
{   char strl[80];
    clrscr();
    printf("Type a line:\n");
    gets(strl);
    printf("Color line is:\n");
    textcolor(GREEN);
    cprintf("%s",strl);
    getch();
}
```

Output

Type a line:

Mizanur Rahaman Mizan.

Color line is:

Mizanur Rahaman Mizan.