

45.

Write a program that read mark from keyboard and display pass or fail.

```
#include <stdio.h>
#include <conio.h>
int main()
{
    float mark;
    printf("Enter mark: ");
    scanf("%f", &mark);
    if (mark >= 33)
    {
        printf("Pass");
    }
    else
    {
        printf("Fail");
    }
    getch();
}
```

logic

mark \geq 33

→ P

else

F

16. Write a program that read digit & display by spelling.

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

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

```
int main ()
```

```
{
```

```
    int digit;
```

```
    printf("Enter the value of
```

```
digit : ");
```

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

```
    switch (digit)
```

```
    {
```

```
        case 0:
```

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

```
            break;
```

```
        case 1:
```

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

```
            break;
```

```
        case 2:
```

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

```
            break;
```

```
        case 3:
```

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

```
            break;
```

```
        case 4:
```

logic

0 → zero

1 → one

2 → two

3 - "

Case: 4

```
printf ("Four");  
break;
```

Case: 5

```
printf ("Five");  
break;
```

Case: 6

```
printf ("Six");  
break;
```

Case: 7

```
printf ("Seven");  
break;
```

Case: 8

```
printf ("Eight");  
break;
```

Case: 9

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

default:

```
printf ("Not a single digit  
please enter single digit
```

```
getchar();
```

↓

Q.42. Write a program to find out the summation of $1 \cdot 2 + 2 \cdot 3 + 3 \cdot 4 + \dots$ up to n^{th} term.

logic

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

int main ()
{
    int main i, n, sum = 0;

    printf ("Enter the value of n: ");
    scanf ("%d", &n);

    for (i = 1; i <= n; i++)
    {
        sum = sum + i * (i + 1);
    }

    printf ("%d", sum);
    getch();
}
```

48. Write the program to find out the summation of $2.1 + 3.3 + 8.5 \dots n$

```
#include <stdio.h>
#include <conio.h>
int main ()
{
    int i, n, sum = 0;
    printf ("Enter the value of n: ");
    scanf ("%d", &n);
    for (i = 1; i <= n; i++)
    {
        sum = sum + (3*i - 1) * (2*i - 1);
    }
    printf ("%d", sum);
    getch();
}
```

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

```
int main()
```

```
{
```

```
    int i, n, sum=0
```

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

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

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

```
    {
```

```
        sum = sum + i
```


$$\Rightarrow 1 \cdot 3 + 3 \cdot 5 + 5 \cdot 7 + \dots$$

$$3 + 5 + 7$$

$$(2 \cdot i + 1)$$

$$= 2 \cdot 1 = 3$$

$$= 2 \cdot 2 + 1 = 5$$

$$= 2 \cdot 3 + 1 = 7$$

$$\text{for } (i=1; i \leq n; i++)$$

{

$$\text{sum} = \text{sum} + (2 \cdot i - 1) \cdot$$

$$(2 \cdot i + 1);$$

$$\Rightarrow 1^2 + 3^2 + 5^2 + \dots$$

$$\text{for } (i=1, i \leq n, i++)$$

{

$$\text{sum} = \text{sum} + i \cdot (2 \cdot i - 1) \cdot (2 \cdot i - 1)$$

}

$$\cancel{1 \cdot 2^2 + 4^2 + 6^2 + \dots}$$

$$\Rightarrow 1 \cdot 2^2 + 2 \cdot 3^2 + 3 \cdot 4^2 + \dots$$

$$\text{sum} = \text{sum} + i \cdot (i+1)^2 \cdot (i+1)$$

$$\Rightarrow 1^2 \cdot 2^2 + 2^2 \cdot 3^2 + 3^2 \cdot 4^2$$

$$\text{sum} = \text{sum} + i \cdot i \cdot (i+1)^2 \cdot (i+1)$$

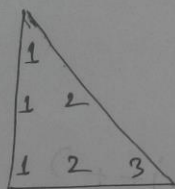
$$1 \cdot 2 \cdot 3 + 2 \cdot 3 \cdot 4 + 3 \cdot 4 \cdot 5$$

$$\text{sum} = \text{sum} + i * (i+1) * (i+2)$$

$$1 \cdot 3 \cdot 5 \cdot 7 + 3 \cdot 5 \cdot 7 \cdot 9 + 5 \cdot 7 \cdot 9 \cdot 11$$

$$\text{sum} = \text{sum} + i * (i+2) * (i+4) * (i+6)$$

pyramids:



→ a b c d e f
→ a ----- f
→ " %4d "

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

{

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

printf ("%4d", j);

printf ("\n");

}

getchar();

}

2nd n=4 2d

→

1

1 2

1 2 3

1 2 3 4

~~2nd n=4 2d~~

④ A
A B
A B C

97 = a

65 = A

96 = 2

```
for (i = 1; i ≤ n; i++)
{
```

```
    for (j = 1; j ≤ i; j++)
```

```
        printf ("%4c", j);
```

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

```
    }
```

j ka value i mein

Output

1

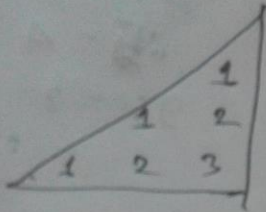
2 2

3 3 3

④ for (i = n; i ≥ 1; i--)

{ same

}



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

Program 56:

(Specimen) Date: 2.04.2011

Write a program to use of sizeof operator.

```
#include <stdio.h>
#include <conio.h>
int main()
{
    printf("char: %u/r/n", sizeof(char));
    printf("int: %u/r/n", sizeof(int));
    printf("float: %u/r/n", sizeof(float));
    printf("double: %u/r/n", sizeof(double));
}
```

Output:

char: 1 byte \rightarrow 8 bit
int: 2 byte \rightarrow 16 bit
float: 4 byte \rightarrow 32 bit
double: 8 byte \rightarrow 64 bit.