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DATE

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Class: CE-3

Practical-2

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tical 2 (i) Write a program to understand concepts of others operators (bitwise, increment / decrement, conditional, etc.)

* Code:-

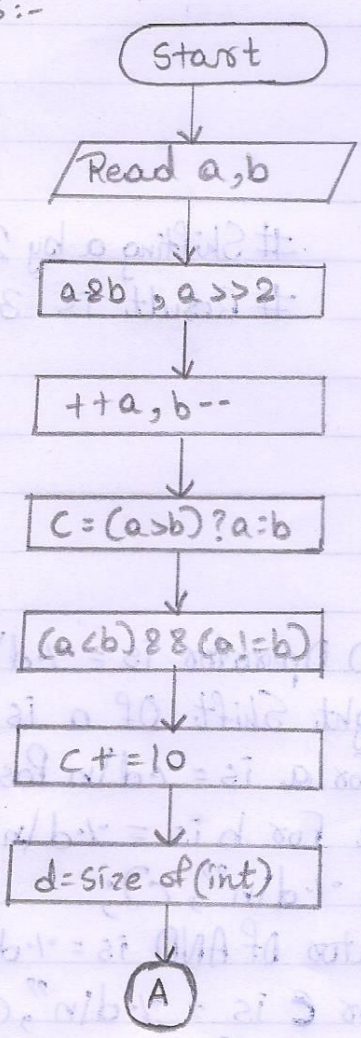
```
#include <stdio.h>

int main()
{
    int a,b,c,d;

    printf("Enter The Values Of a and b: ");
    scanf("%d %d", &a, &b);

    c= (a>=b) ? a : b;
    d= sizeof(int);
    /*  12      00001100        # Shifting a by 2 bit 12 00000011
        25      00011001        # Result is 3.

        ---------------------

        # And (&) 00001000
        # Result is 8
    */

    printf("Bitwise Value For AND Operator is = %d\n Bitwise Value
                For Right Shift Of a is = %d\n",a&b,a>>2);
    printf("Pre-Increment Value For a is = %d\n Post-Decrement
                Value For b is = %d\n", ++a,b--);
    printf("Maximum Value is = %d\n", c);
    printf("Value For Logical Operator Of AND is = %d\n",(a<b)&&(a!=b));
    printf("Assignment Value For c is = %d\n",c+=10);
    printf("Size Of b Variable = %d",d);
}
```

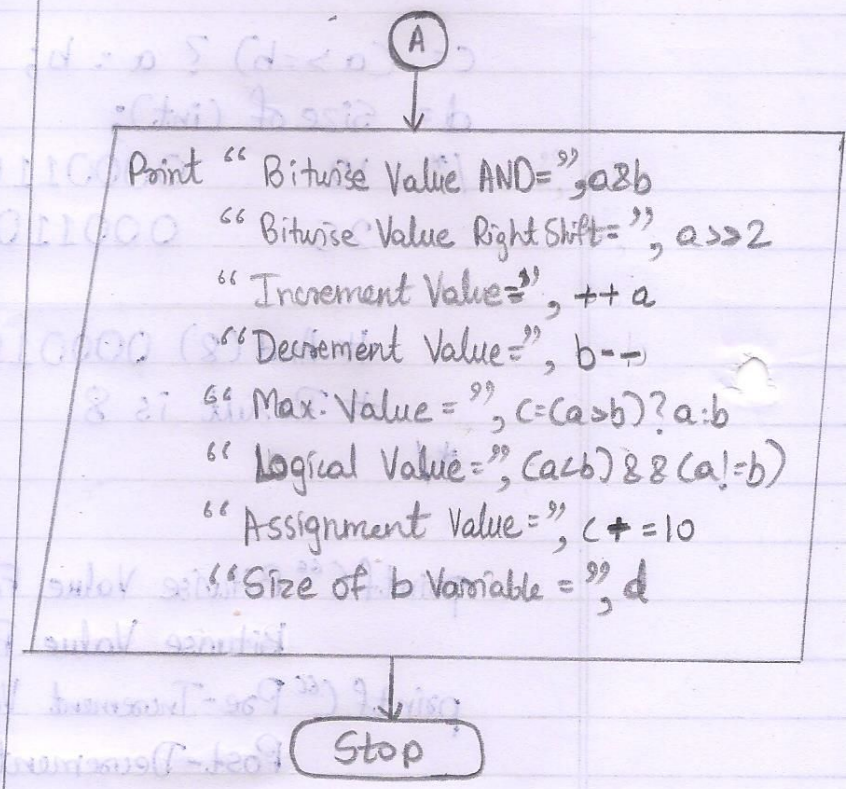
*Output:-

Enter The Values Of a and b: 12
25
Bitwise Value For AND Operator is =8
Bitwise Value For Right Shift Of a is = 3
Pre-Increment Value For a is = 13
Post-Decrement Value For b is = 25
Maximum Value is = 25
Value For Logical Operator Of AND is = 1
Assignment Value For c is = 35
Size Of b Variable = 4

[Int value come 4 bytes because of newer version of software name Code Blocks is used]

Flowcharts:-





Algorithms:-

Step 1: Input a,b

Step 2: Calculate a&b , a>>2

Step 3: Calculate ++a, b--

Step 4: Calculate c=(a>b)?a:b

Step 5: Calculate (a<b) && (a!=b)

Step 6: Calculate c+=10

Step 7: Calculate d= size of (int)

Step 8: Print "Bitwise Value AND=", a&b
"Bitwise Value Right Shift=", a>>2
"Increement Value=", ++a
"Decrement Value=", b--
"Max Value=", c=(a>b)?a:b
"Logical Value=", (a<b) && (a!=b)
"Assignment Value=", c+=10
"Size of b Variable=", d

Step 9: Stop

Practical 2:(ii) Write a program to find area of square, rectangle, triangle and circle.

* Code:-

```
# include <stdio.h>

int main()
{
    float a,b, Area1, Area2, Area3, Area4;

    printf("Enter The Values of a and b:\n");

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

    Area1 = a * a;
    Area2 = a * b;
    Area3 = a * b / 2;
    Area4 = 3.14 * a * a;

    printf("\n Area Of The Square is : %.2f", Area1);
    printf("\n Area Of The Rectangle is : %.2f", Area2);
    printf("\n Area Of The Triangle is : %.2f", Area3);
    printf("\n Area Of The Circle is : %.2f", Area4);

}
```

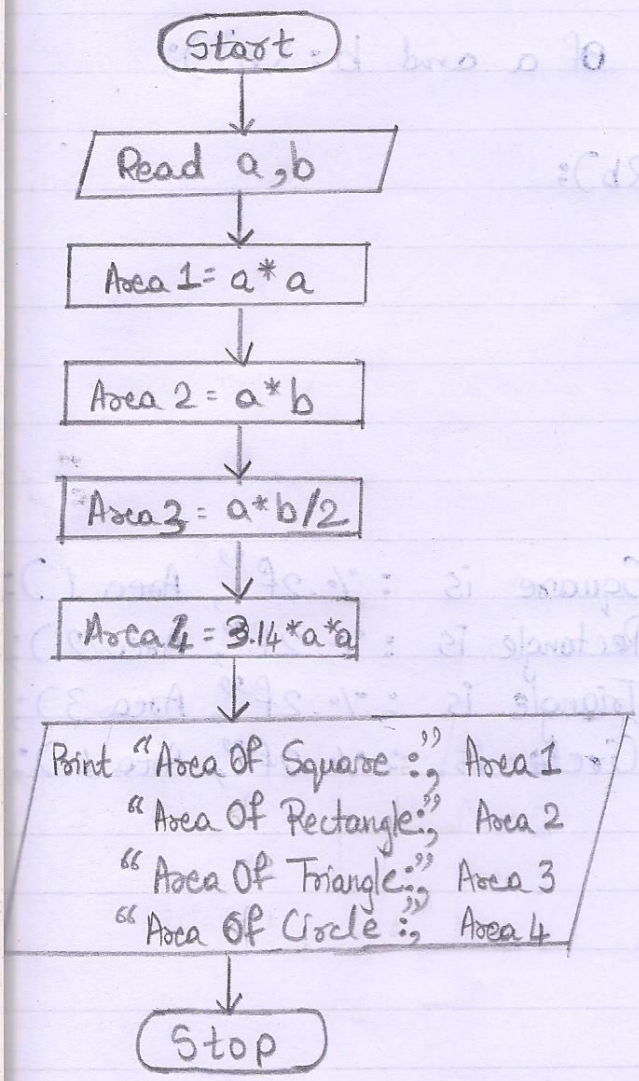
[Program : CodeBlocks]

* Output:-

Enter The Values Of a and b :
1.256
3.457

Area Of The Square is : 1.58
Area Of The Rectangle is : 4.34
Area Of The Triangle is : 2.17
Area Of The Circle is : 4.95

Flowcharts:-



Algorithms:-

Step 1: Input a, b

Step 2: Calculate Area 1 = a*a

Step 3: Calculate Area 2 = a*b

Step 4: Calculate Area 3 = a*b/2

Step 5: Calculate Area 4 = 3.14*a*a

Step 6: Print "Area of Square :", Area 1
"Area of Rectangle:", Area 2
"Area Of Triangle:", Area 3
"Area Of Circle:", Area 4

Step 7: Stop.

ctical 2(iii) Write a program to calculate Simple Interest (I= P*R*T/100)
Where I= Simple Interest P= Principal Amount
R= Rate of Interest N= No. of years.

* Code:-

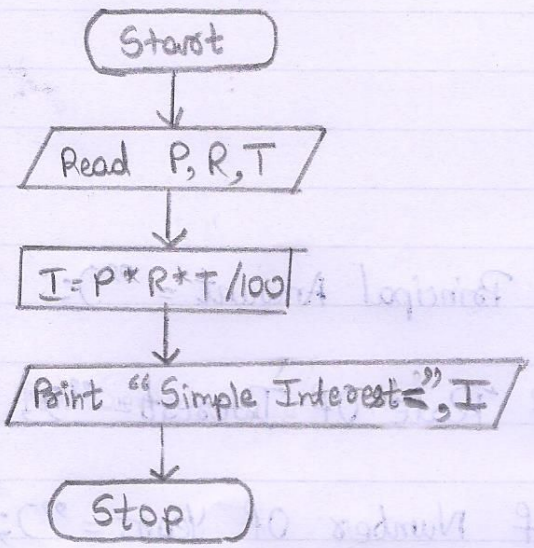
```
# include <stdio.h>

int main()
{
    float I, P, R, N;

    printf("Enter The Value Of Principal Amount = ");
    Scanf("%f", &P);
    printf("Enter The Value Of Rate Of Interest= ");
    Scanf("%f", &R);
    printf("Enter The Value Of Number Of Years = ");
    Scanf("%f", &N);

    I = P * R * N /100;

    printf("Simple Interest = %.2f", I);
}
```

[Program: Code Blocks]

* Output:-

Enter The Value Of Principal Amount = 253
Enter The Value Of Rate Of Interest = 5.3
Enter The Value Of Number Of Years = 7
Simple Interest = 93.86

Flowcharts:-



Algorithms:-

Step 1: Input P, R, T

Step 2: Calculate I = P * R * T / 100

Step 3: Print "Simple Interest=", I

Step 4: Stop