

Experiment no – 05(a) Aim:

Write a program to print area of square using function.

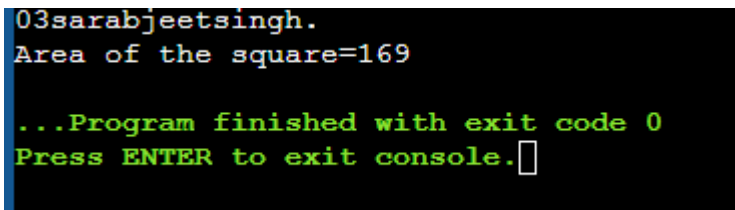
Algorithm:

- i. Start.
- ii. Declare s as integer.
- iii. Initialize value of s.
- iv. Calculate $s \times s$.
- v. print area of square.
- vi. End.

Code: #include

```
<stdio.h>
int
main()
{
printf("03sarabjeetsingh.\n");
int s=13;
area_square=s*s;
printf("Area of the square=%d",area_square);
}
```

Output:



```
03sarabjeetsingh.
Area of the square=169
...Program finished with exit code 0
Press ENTER to exit console.
```

Experiment no – 05(b) Aim:

Write a program using recursive function.

Algorithm:

- i. Start.
- ii. Read the Input.
- iii. Perform recursion.
- iv. Print result.
- v. Stop.

Code:

```

#include <stdio.h> int
sum(int n);

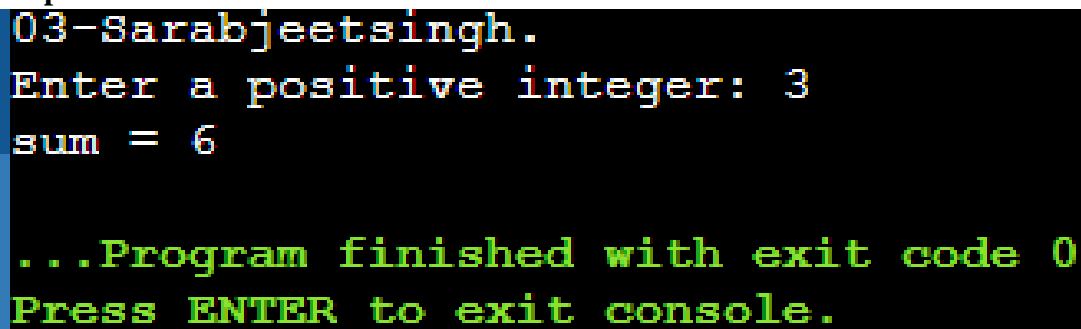
int main() { printf("03-Sarabjeetsingh.\n");
int number, result;

    printf("Enter a positive integer: ");
scanf("%d", &number);    result =
sum(number);    printf("sum = %d",
result);    return 0; } int sum(int n) {
if (n != 0)

    // sum() function calls itself
return n + sum(n-1);    else
return n;
}

```

Output:



```

03-Sarabjeetsingh.
Enter a positive integer: 3
sum = 6

...Program finished with exit code 0
Press ENTER to exit console.

```

Experiment no – 05(c) Aim:

Write a program to square root, abs() value using function.

Algorithm:

- i. Start
- ii. Read the input
- iii. Calculate absolute value
- iv. Calculate square root value
- v. Print results

vi. **Stop Code:**

```
#include<stdio.h>

#include<math.h> int

main()

{ printf("03-Sarabjeetsingh.\n");

int num, a;

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

scanf("%d",&num); a = abs(num);

printf("Calculated absolute value is : %d\n", a); a =

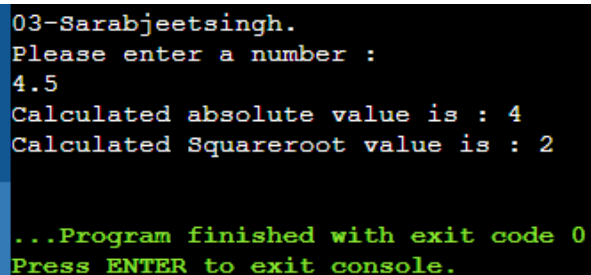
sqrt(num);

printf("Calculated Squareroot value is : %d\n",a);

return 0;

}
```

Output:

A screenshot of a terminal window with a black background and white text. The output shows the program's execution: it prints a header, prompts for a number, receives the input '4.5', and then prints the calculated absolute value (4) and square root (2). At the end, it shows the program finished with exit code 0 and prompts the user to press ENTER to exit the console.

```
03-Sarabjeetsingh.
Please enter a number :
4.5
Calculated absolute value is : 4
Calculated Squareroot value is : 2

...Program finished with exit code 0
Press ENTER to exit console.
```

Experiment no – 05(d) Aim:

Write a program using go to statement.

Algorithm:

- i. Start
- ii. Read the Input
- iii. Check if the input is inside loop or outside loop
- iv. Print result v. Stop

```
Code: #include<stdio.h> int main()
{ printf("03-sarabjeesingh.\n");
  int n;
  for(;;) /*ifinite loop*/
  {
    printf("enter any number :");
    scanf("%d",&n); if(n == 5)
    goto ap; /* use of goto statement*/ if
    (n% 2 == 0)
      continue; /*use of continue statement*/
    if (n% 3 == 0) break; /*use of break
    state*/ printf("Inside loop");
  } ap: printf("Outside
  loop"); return 0;
}
```

Output:

```
01-AlstonAlvares.
enter any number :2
enter any number :3
Outside loop

...Program finished with exit code 0
Press ENTER to exit console.
```