1. Find the factorial of a number using recursive function.

**ANS:**

#include<stdio.h>

main()

{

int a, result;

printf("Enter an integer to find factorial: \n");

scanf("%d", &a);

result = factorial(a);

printf("Factorial of %d is: %d\n", a, result);

}

int factorial (int b)

{

if(b==0)

return 1;

else

return(b\*factorial(b-1));

}

1. Find the Fibonacci series of number using recursive function.

**ANS:**

#include<stdio.h>

main()

{

int a, b;

printf("Enter an integer to show it's Fibonacci Series:\n");

scanf("%d", &a);

printf("Fibonacci Series:");

for(b=0; b<a;b++)

{

printf("%d ", fibonacci(b));

}

}

int fibonacci(int a)

{

if(a==0||a==1)

{

return a;

}

else

{

return(fibonacci(a-1)+fibonacci(a-2));

}

}

1. Find the power of a number using recursive function. (Base & power from user)

**ANS:**

#include<stdio.h>

int result(int b, int p)

{

if(p==0)

return 1;

else

b\*=result(b,p-1);

return b;

}

main()

{

int base, power;

printf("Enter base & power: \n");

scanf("%d %d", &base, &power);

printf("Result: %d", result(base,power));

}

1. Write a program using structure where “student” is a structure variable. And “s1” as “student” type variable. From the user you have to collect First name, Last name and ID for one student. Print the collected data.

**ANS:**

#include<stdio.h>

struct student

{

char first[20];

char last[20];

int id;

}s1;

main()

{

printf("Enter first name:\n");

scanf("%s", s1.first);

printf("Enter last name:\n");

scanf("%s", s1.last);

printf("Enter id:\n");

scanf("%d", &s1.id);

printf("Name: %s %s\nId: %d\n\n", s1.first, s1.last, s1.id);

}

1. Write a program using structure where “student” is a structure variable. And “s1” as “student” type variable. From the user you have to collect First name, Last name and ID for a number of student inputted by user. Print the collected data.

**ANS:**

#include<stdio.h>

struct student

{

char first[20];

char last[20];

int id;

};

main()

{

int a, b;

printf("Enter students number:\n");

scanf("%d", &b);

struct student s1[b];

for(a=0; a<b; a++)

{

printf("Enter first name:\n");

scanf("%s", s1[a].first);

printf("Enter last name:\n");

scanf("%s", s1[a].last);

printf("Enter id:\n");

scanf("%d", &s1[a].id);

}

for(a=0; a<b; a++)

{

printf("Name: %s %s\nId: %d\n\n", s1[a].first, s1[a].last, s1[a].id);

}

}