**//Q1:WAP to check a number is pallindron or not using recursion:**

#include<stdio.h>

int checkPalindrome(int);

int main(){

int num,sum;

printf("Enter a number: ");

scanf("%d",&num);

sum = checkPalindrome(num);

if(num==sum)

printf("%d is a palindrome",num);

else

printf("%d is not a palindrome",num);

return 0;

}

int checkPalindrome(int num){

static int sum=0,r;

if(num!=0){

r=num%10;

sum=sum\*10+r;

checkPalindrome(num/10);

}

return sum;

}

**OUTPUT:**

**Ex1:**

Enter a number: 131

131 is a palindrome

**Ex2:**

Enter a number: 1451

1451 is not a palindrome

**//Q2:WAP to find the largest element of an array using recursion:**

#include<stdio.h>

int getMaxElement(int []);

int size;

int main(){

int arr[100],max,i;

printf("Enter the size of the array: ");

scanf("%d",&size);

printf("Enter %d elements of an array: ", size);

for(i=0;i<size;i++)

scanf("%d",&arr[i]);

max=getMaxElement(arr);

printf("Largest element of an array is: %d",max);

return 0;

}

int getMaxElement(int arr[]){

static int i=0,max =-9999;

if(i < size){

if(max<arr[i]){

max=arr[i];}

i++;

getMaxElement(arr);

}

return max;

}

**OUTPUT:**

Enter the size of the array: 6

Enter 6 elements of an array: 1 24 56 43 73 86

Largest element of an array is: 86

**//Q3:Write a recursive code to print reverse of a number:**

#include<stdio.h>

int reverseNum(int);

int main(){

int n,res;

printf("Enter the number\n ");

scanf("%d",&n);

res=reverseNum(n);

printf("\nThe original number is %d and the reverse number is%d\n",n,res);

return 0;

}

int reverseNum(int n){

static int rev=0;

if(n==0)

return rev;

else{

rev=rev\*10+n%10;

n=n/10;

reverseNum(n);

}

}

**OUTPUT:**

Enter the number

31232

The original number is 31232 and the reverse number is 23213

**//Q4:Write a c program to input a number and return its square using recursion:**

#include <stdio.h>

int square(int );

int main()

{

int num;

printf("Enter a number: ");

scanf("%d", &num);

int result = square(num);

printf("The square of %d is %d\n", num, result);

return 0;

}

int square(int n)

{

if (n == 0)

return 0;

else

return (2 \* n - 1) + square(n - 1);

}

**OUTPUT:**

Enter a number: 6

The square of 6 is 36

**//Q5: WAP to sum of n numbers using recursion:**

#include<stdio.h>

int main()

{

int n,sum;

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

scanf("%d",&n);

sum = getSum(n);

printf("Sum of n numbers: %d",sum);

return 0;

}

int getSum(n)

{

static int sum=0;

if(n>0)

{

sum = sum + n;

getSum(n-1);

}

return sum;

}

**OUTPUT:**

Enter the value of n: 20

Sum of n numbers: 210