

**May 5 Lab questions**

#1. WAP to swap the values of two variables by using a suitable user defined function (say SWAP) for it.

Code:

```
#include <stdio.h>
void swap(int x_285, int y_285)
{
    int temp_285;
    temp_285=x_285;
    x_285=y_285;
    y_285=temp_285;
    printf("The values after swapping are a='%d' and b='%d'\n",x_285,y_285);
}
int main()
{
    int a_285,b_285;
    printf("Please give the value of your first number\n");
    scanf("%d",&a_285);
    printf("please provide the value of your second numebr\n");
    scanf("%d",&b_285);
    printf("=====\n");
    printf("The numbers before swapping are a='%d' and b='%d'\n",a_285,b_285);
    swap(a_285,b_285);
    return 0;
}
```

Output:

```
PS C:\Users\KIIT\Desktop\Programming\05_may functions> cd "c:\Users\KIIT\Desktop\Programming\05_may functi
.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }
Please give the value of your first number
4567
please provide the value of your second numebr
1111
=====
The numbers before swapping are a='4567' and b='1111'
The values after swapping are a='1111' and b='4567'
PS C:\Users\KIIT\Desktop\Programming\05_may functions> |
```

#2. WAP to find out n c r factor by using a user defined function for factorial (say fact).

Code:

```
#include <stdio.h>
int fact(int f_285)
{
    int i_285,n_285;
    n_285=f_285;
    for(i_285=1;i_285<f_285;i_285++)
    {
        n_285=n_285*(f_285-i_285);
    }
    return n_285;
}
int main()
{
    int n_285,r_285,sub_285,a_285,b_285,c_285,ncr_285;
    printf("Please provide your n=\n");
    scanf("%d",&n_285);
    printf("provide your r=\n");
```

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```
scanf("%d",&r_285);
sub_285= n_285-r_285;
a_285=fact(n_285);
b_285=fact(r_285);
c_285=fact(sub_285);
ncr_285=a_285/(c_285*b_285);
printf("The computation of %d and %d is %d\n",n_285,r_285,ncr_285);
return 0;
}
```

Output:

```
PS C:\Users\KIIT\Desktop\Programming\05_may functions> gcc factorial_function.c
PS C:\Users\KIIT\Desktop\Programming\05_may functions> ./a.exe
Please provide your n=
10
provide your r=
2
The computation of 10 and 2 is 45
PS C:\Users\KIIT\Desktop\Programming\05_may functions> █
```

```
PS C:\Users\KIIT\Desktop\Programming\05_may functions> ./a.exe
Please provide your n=
6
provide your r=
2
The computation of 6 and 2 is 15
PS C:\Users\KIIT\Desktop\Programming\05_may functions> █
```

#3. WAP to test whether a number n is palindrome number or not.

Code:

```
#include<stdio.h>
int checkPalindrome(int number_285)
{
    int temp_285, remainder_285, rev_285=0; temp_285 = number_285;
    while( number_285!=0 )
    {
        remainder_285 = number_285 % 10;
        rev_285 = rev_285*10 + remainder_285; number_285 /= 10;
    }
    if ( rev_285 == temp_285 )
        return 0;
    else return 1;
}
int main()
{
    int number_285;
    printf("Enter the number: ");
    scanf("%d", &number_285);
    if(checkPalindrome(number_285) == 0)
```

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```
printf("%d is a palindrome number.\n",number_285);
else printf("%d is not a palindrome number.\n",number_285);
return 0;
}
```

Output:

```
PS C:\Users\KIIT\Desktop\Programming\05_may functions> gcc palindrom_function.c
PS C:\Users\KIIT\Desktop\Programming\05_may functions> ./a.exe
Enter the number: 81618
81618 is a palindrome number.
PS C:\Users\KIIT\Desktop\Programming\05_may functions> █
```

```
PS C:\Users\KIIT\Desktop\Programming\05_may functions> ./a.exe
Enter the number: 45876
45876 is not a palindrome number.
PS C:\Users\KIIT\Desktop\Programming\05_may functions> █
```

#4. WAP to calculate  $x^y$  x, y by writing a function (say POWER) for it.

Code:

```
#include <stdio.h>
int power(int x_285, int y_285)
{
    int res_285=x_285,i_285;
    for(i_285=1;i_285<y_285;i_285++)
    {
        res_285=res_285*x_285;
    }
    return res_285;
}
int main()
{
    int x_285,y_285,result_285;
    printf("Please provide the number;\n");
    scanf("%d",&x_285);
    printf("Please provide the exponent\n");
    scanf("%d",&y_285);
    result_285 = power(x_285,y_285);
    printf("The result is %d\n",result_285);
    return 0;
}
```

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Output:

```
PS C:\Users\KIIT\Desktop\Programming\05_may functions> gcc power_function.c
PS C:\Users\KIIT\Desktop\Programming\05_may functions> ./a.exe
Please provide the number;
6
Please provide the exponent
10
The result is 60466176
```

```
PS C:\Users\KIIT\Desktop\Programming\05_may functions> ./a.exe
Please provide the number;
4
Please provide the exponent
4
The result is 256
PS C:\Users\KIIT\Desktop\Programming\05_may functions> █
```