Assignment-5

User Defined function

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1. WAP to find the square of any number using the function.

```c
#include<stdio.h>
int square(int);
int main(){
    int i,r;
    printf(" Enter the number :");
    scanf("%d",&i);
    r=square(i);
    printf("The square of given number  is %d :",r);
    return 0;
}
int square(int s){

    s*s;
    return s*s;
}
```

2. WAP to swap two numbers using function.

```c
#include<stdio.h>
int swap(int);
int main()
{
    int a,b;
    printf("Enter the two digit number :");
    scanf("%d",&a);
    b=swap(a);
    printf("The swaped number is :%d",b);
    return 0;
}
int swap(int c)
{
    int d,e;
    d= c%10;
    e= c/10;
    return((d*10)+e);
}
```

3. WAP to check a given number is even or odd using the function.

```c
#include <stdio.h>

int oddeven(int);
int main()
{
    int n, res;
    printf("Enter a number :");
    scanf("%d", &n);
    res = oddeven(n);
    if (res==1)
        printf("Odd number");
    else
        printf("Even number ");
    printf("\n");
    return 0;
}
int oddeven(int a)
{
    if (a % 2 == 0)
        return 0;
    return 1;
}
```

4. WAP to read a +ve integer and find the sum of digits using function.

```c
#include<stdio.h>
int sum(int);
int main()
{
    int a,b;
    printf("Enter the 3 digits number :");
    scanf("%d",&a);
    b=sum(a);
    printf("The sum of digits is :%d",b);

    return 0;
}
int sum(int b)
{
    int c,d,e,f;
    c=b%100;
    f=c%10;
    d=c/10;
    e=b/100;
    return (f+d+e);
}
```

5. WAP to find the factorial of a given number using function.

```c
#include<stdio.h>
int fact(int i);

int main()
{
    int n;
    printf("Enter the number :");
    scanf("%d",&n);

    printf("The factorial the given number is %d",fac
t(n));
    return 0;
}

int fact(int i)
{
    int x=1,j;
    for(j=i;j>0;j--)
    x=x*j;

    return(x);
}
```

6. WAP to convert a given lowercase letter to uppercase using function.

```c
#include <stdio.h>

char myuppercase(char);

int main()
{
    char ch;

    printf("Enter lowercase letter :");
    scanf("%c", &ch);
    printf("Uppercase:%c", myuppercase(ch));
    printf("\n");
    return 0;
}
char myuppercase(char x)
{
    if (x >= 'a' && x <= 'z')
        return (x - 32);
}
```

7. WAP to reverse a given number using function.

```c
#include <stdio.h>
int reverse(int);

int main()
{
    int m, rev;
    printf("Enter the number to be reversed :");
    scanf("%d", &m);
    rev = reverse(m);
    printf("The reverse of number is:%d", rev);
    return 0;
}
int reverse(int x)
{
    int i, y = 0;
    for (i = x; i > 0; i /= 10)
        y = y * 10 + i % 10;
    return y;
}
```

8. WAP to find the HCF of two given numbers using function.

```c
#include <stdio.h>
int hcf(int,int);
int main()
{
    int num1, num2,h;
    printf("Enter the two numbers:");
    scanf("%d%d", &num1, &num2);
    h=hcf(num1,num2);
    printf("\nHCF of(%d,%d)=%d", num1, num2,h);
    return 0;
}

int hcf(int a,int b)
{

    int i,j;
    for(i=1;i<a+1;i++)
        if(a%i==0)
        if(b%i==0)
        j=i;
    return j;
}
```

9. WAP to find the LCF of two given numbers using function.

```c
#include <stdio.h>
int lcm(int, int);
int main()
{
    int num1, num2, lc;
    printf("Enter the two numbers:");
    scanf("%d%d", &num1, &num2);
    lc = lcm(num1, num2);
    printf("\nLCM(%d,%d)=%d", num1, num2, lc);
    return 0;
}

int lcm(int cnum1, int cnum2)
{
    int i, j;
    for (i = 1; i < cnum1+1; i++)

        if (cnum1 % i == 0)
            if (cnum2 % i == 0)
                j = i;
        j = (cnum1 * cnum2) / j;

    return j;
}
```

10. WAP to find the value of one number raised to the power of another using function.

```c
#include <stdio.h>
int power(int, int);

int main()
{
    int a, b, pow;
    printf("Enter the number:");
    scanf("%d", &a);
    printf("Enter the required power:");
    scanf("%d", &b);
    pow = power(a, b);
    printf("The required value is %d", pow);
    return 0;
}
int(power(int n, int m))
{
    int i, j = 1;
    for (i = m; i > 0; i--)
        j = j * n;
    return j;
}
```

11. WAP to convert decimal number to binary number using the function.

```c
#include <stdio.h>

int binary(int);

int main()
{
    int d;
    printf("Enter a number: ");
    scanf("%d", &d);
    printf("The binary is %d", binary(d));
    return 0;
}

int binary(int n)
{
    int  a = 1,b = 0;
    do
    {
        b = b + a * (n % 2);
        n = n / 2;
        a = a * 10;
    }
    while (n > 0);
    return b;
}
```

12. WAP to check whether a number is a prime number or not using the function.

```c
#include <stdio.h>
int(prime(int));
int main()
{
    int n;
    printf("Enter a number:");
    scanf("%d", &n);
    prime(n);
    return 0;
}
int(prime(int a))
{
    int i;
    for (i = 2; i <=a / 2; i++)
    {
        if (a % i == 0)
            {
                printf("%d is not a prime number.", a
);
            }
        else if (i == a / 2)
            {
                printf("%d is a prime number.", a);
            }

        else;
    }
}
```