ASSIGNMENT 1 (DAY1 PART2)

Q1 Write a program to check whether a given number is odd or even.

```c
#include<stdio.h>
int main()
{
 int i;
 printf("Enter the number: ");
 scanf("%d",&i);
 if(i==0){
    printf("Whole number\n");
    }
 else if(i%2==0){
    printf("Even number\n");
    }
 else{
    printf("Odd number\n");
    }
return 0;
}
```

Q2 Write a C program to check whether the input is digit or alphabet. Print the ASCII number if it is a digit.

```c
#include<stdio.h>
int main()
{
 char ch;
 printf("enter the input\n");
 scanf("%c",&ch);
 if((ch>='a' && ch<='z') || (ch>='A' && ch<='Z')){
    printf(" input is character\n");
    }
 if((ch>='0') && (ch<='9')){
    printf("input is digit\n");
    printf("the ASCII number of digit %c is %d\n",ch,ch);
    }
return 0;
}
```

Q3 Write a program to create a simple calculator to perform Addition, Subtraction, Multiplication and Division using switch statement. Take the required operation as input from the user.

```c
#include<stdio.h>
int main()
{
  int n;
  float a,b,c;
  printf("Enter the 1st number: ");
  scanf("%f",&a);
  printf("Enter the 2nd number: ");
  scanf("%f",&b);
  printf("Choose the operator:  \n1: ADDITION,\n2: SUBSTRACTION,\n3:
MULTIPLICATION,\n4: DIVISION,\n");
  scanf("%d",&n);
  switch(n){
  case 1 : c=a+b;
           printf("%f + %f =%.2f \n",a,b,c);
           break;
  case 2 : c=a-b;
           printf("%f - %f =%.2f \n",a,b,c);
           break;
  case 3 : c=a*b;
           printf("%f * %f =%.2f \n",a,b,c);
           break;
  case 4 : c=a/b;
           printf("%f / %f =%.2f \n",a,b,c);
           break;
  default: printf("Choose a valid option\n");
  }
return 0;
}
```

Q4 Write a program to find out the sum of first n natural numbers. Take n as input from the user.

```c
#include<stdio.h>
int main()
{
     int n,sum=0,i=1;
     printf("enter the number: \n");
     scanf("%d",&n);
     while(i<=n){
        sum+=i;
        i++;
     }
printf("sum of %d natural no. is: %d \n",n,sum);
return 0;
}
```

Q5 Write a program to check whether the given number is perfect number or not. A number is called as a perfect number if the sum of the factors of that number is equal to the same number. Example: 6 = 1 + 2 + 3

```c
#include<stdio.h>
int main()
{
 int n,i,k,sum=0;
 printf("enter the number: \n");
 scanf("%d",&n);
 for(i=1;i<n;i++){
     if(n%i==0){
     sum+=i;
     }
 }
(sum==n)?printf("perfect number\n"):printf("not a perfect number\n");
return 0;
}
```

Q6 Write a program to find the sum of numbers in a given range.

```c
#include<stdio.h>
int main()
{
int i,s,e,sum=0;
printf("enter the range first number: ");
scanf("%d",&s);
printf("enter the range last number: ");
scanf("%d",&e);
for(i=s;i<=e;i++){
sum+=i;
}
printf("\nsum of number in range %d to %d is %d\n",s,e,sum);
return 0;
}
```

Q7 Write a program to calculate the sum of the digits of a given number.

```c
#include<stdio.h>
int main()
{
  int n,sum=0,r;
  printf("enter the number: \n");
  scanf("%d",&n);
  if((n/10)!=0)
  {
   while(n>0){
   r=n%10;
   sum+=r;
   n=n/10;
   }
   printf("\nsum of digits is: %d\n",sum);
  }
```

```c
    else{
    sum+=n;
    printf("\nsum of digits is: %d\n",sum);
    }
return 0;
}
```