Practical No.04

Aim: Programs based on various loops (for, while, do-while)

1.   C Program to check given number is perfect number or not.

Program:

```c
#include<stdio.h>
#include<conio.h>

void main()
{
    int n,i=1,sum=0;

    clrscr();

    printf("Enter a number: ");
    scanf("%d",&n);

    while(i<n)
    {
        if(n%i==0)
            sum=sum+i;
            i++;
    }

    if(sum==n)
        printf("%d is a perfect number",i);
    else
        printf("%d is not a perfect number",i);

    getch();
}
```
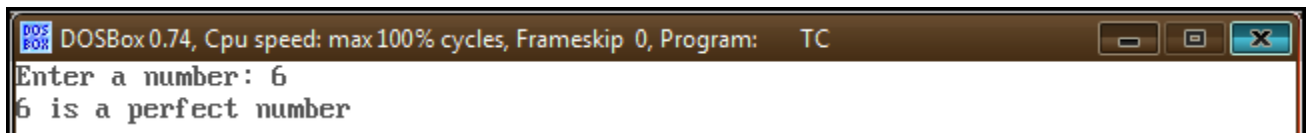
Output:

```
Enter a number: 6
6 is a perfect number
```


```
DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip 0, Program:    TC
Enter a number: 6
6 is a perfect number
```

2.   C Program to Check the given number is Armstrong number or not

Program:

```c
#include<stdio.h>
#include<conio.h>

void main()
{
    int num,r,sum=0,temp;
    clrscr();

    printf("Enter a number: ");
    scanf("%d",&num);

    temp=num;
```

```c
    while(num!=0)
    {
        r=num%10;
        num=num/10;
        sum=sum+(r*r*r);
    }

    if(sum==temp)
        printf("%d is an Armstrong number",temp);
    else
        printf("%d is not an Armstrong number",temp);

    getch();
}
```
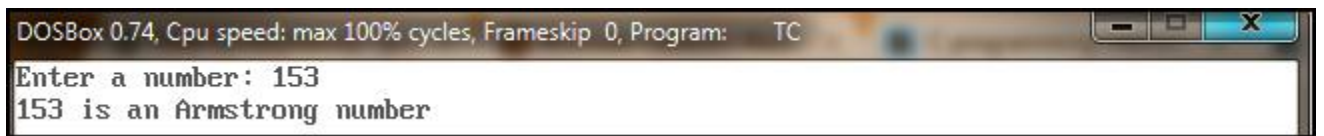
Output:
```
Enter a number: 153
153 is an Armstrong number
```


3.   C Program to Check the given number is Neon number or not

Program:
```c
#include<stdio.h>
#include<conio.h>

void main()
{
    int n,sq,i,sum=0;
    clrscr();

    printf("Enter the number:\t");
    scanf("%d",&n);

    sq = n * n;

    for(i = sq; i > 0; i = i/10)
    sum = sum + i % 10;

    if(sum == n)
        printf("%d is a neon number.",n);
    else
        printf("%d is not a neon number.",n);

    getch();
}
```

Output:
```
Enter the number: 9
9 is a neon number.
```


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