Logic Building Assignment : 4

Create separate visual Studio project for each problem statement separately.

1. Accept number from user and return difference between largest factor and smallest factor of that number.
In this question you have to write the logic which should not be dependent on other function.
(Smallest factor should not be 1 and largest factor should not be that number itself)

Input : 18
Output : 7 (9-2)

Input : 51
Output : 14 (17-3)

Input : 7
Output : 0 (0 - 0)

Input : 4
Output : 0 (2 - 2)

Program Layout :

```
#include<stdio.h>

int FactorSmallLarge(int iNo)
{
	// Logic
}

int main()
{
	int iValue = 0;
	int iRet = 0;

	printf("Enter number");
	scanf("%d",& iValue);

	iRet = FactorSmallLarge(iValue);

	printf("Difference between largest and smallest factor is %d ",iRet);

	return 0;
}
```

2. Accept number from user and return difference between summation of non factors and summation of factors.
In this question you have to write the logic which should not be dependent on other function.

Input : 12
Output : 34 ((5 + 7 + 8 + 9 + 10 + 11) - (1 + 2 + 3 + 4 + 6))

Input : 9
Output : 28 ((2 + 4 + 5 + 6 + 7 + 8) - (1 + 3))

Program Layout :

```
#include<stdio.h>

int FactorDiff(int iNo)
{
	// Logic
}

int main()
{
	int iValue = 0;
	int iRet = 0;

	printf("Enter number");
	scanf("%d",& iValue);

	iRet = FactorDiff(iValue);

	printf("Difference between non factors and factors is %d ",iRet);

	return 0;
}
```

3. Accept number from user and check whether number is prime or not.
Prime number is such a number without any factor except 1.
In this question you have to write the logic which should not be dependent on other function.

Input : 7
Output : 7 is prime number

Input : 36
Output : 36 is not prime number

Program Layout :

```
#include<stdio.h>

#define TRUE 1
#define FALSE 0

typedef int BOOL;

BOOL ChkPrime(int iNo)
{
	// Logic
}

int main()
{
	int iValue = 0;
	BOOL bret = FALSE;

	printf("Enter number");
	scanf("%d",& iValue);

	bRet = ChkPrime(iValue);

	if(bRet == TRUE)
	{
		printf("%d is Prime number",iValue);
	}
	else
	{
		printf("%d is not a Prime number",iValue);
	}

	return 0;
}
```

4. Write program which accept number from user and return multiplication of all factors of that number.
In this question you have to write the logic which should not be dependent on other function.

Input : 7
Output : 7 (1)

Input : 9
Output : 3 (1 * 3)

Input : 12
Output : 144 (1 * 2 * 3 * 4 * 6)

Program Layout :

```
#include<stdio.h>

int FactMult(int iNo)
{
	// Logic
}

int main()
{
	int iValue = 0;
	int iret = 0;

	printf("Enter number");
	scanf("%d",& iValue);

	iret = FactMult(iValue);

	printf("Multiplication of factors is",iValue);

	return 0;
}
```