```
/*
A1. Check whether a given number can be expressed as the sum of two prime number
i/p
Enter a positive integer: 34
Output
34 = 3 + 31

34 = 5 + 29
34 = 11 + 23
34 = 17 + 17
NoofWays = 4

NoofWays=-1
*/



#include <stdio.h>
#include <stdbool.h>



bool checkPrime(int num)
{
   if (num <= 1)
   {
      return false;
   }
```

```
    if (num == 2 || num == 3)
    {
        return true;
    }

    if (num % 2 == 0 || num % 3 == 0)
    {
        return false;
    }

    for (int i = 5; i * i <= num; i += 6)
    {
        if (num % i == 0 || num % (i + 2) == 0)
        {
            return false;
        }
    }

    return true;
}

int main()
{
    int n;
    printf("Enter a positive integer: ");
    scanf("%d", &n);

    int count = 0;
```

```
    for (int i = 2; i <= n / 2; i++)
    {
        int j = n - i;

        if (checkPrime(i) && checkPrime(j))
        {
            printf("\%d = %d + %d\n", n, i, j);
            count++;
        }
    }


    if (count == 0)
    {
        printf("\nNoofWays = -1\n");
    }
    else
    {
        printf("\nNoofWays = %d\n", count);
    }

    return 0;
}
```