Topic : Programming/ Two Pointers/ 3 Sum

Question:

Given an array S of n integers, find three integers in S such that the sum is closest to a given number, target.
Return the sum of the three integers.

Assume that there will only be one solution

Example:
given array S = {-1 2 1 -4},
and target = 1.

The sum that is closest to the target is 2. (-1 + 2 + 1 = 2)

Code :

```
int Solution::threeSumClosest (vector < int >&A, int B)
{
 int n = A.size ();
 sort (A.begin (), A.end ());
 long bestSum = 10000000000, sum = 0;
 for (int i = 0; i < n - 2; i++)
  {
   int s = i + 1, e = n - 1;
   while (s < e)
      {
       sum = long (A[i]) + A[s] + A[e];
       if (abs (B - sum) < abs (B - bestSum))
         bestSum = sum;
       else if (sum > B)
         e--;
       else
         s++;
```

```
        }
    }
  return bestSum;
}
```