Week-06-One-Dimensional Array

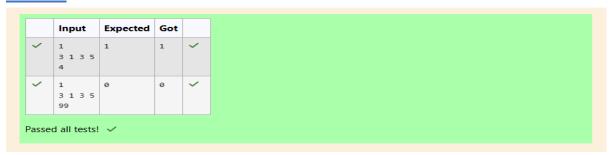
Week-06-01-Practice Session-Coding

```
Question 1
                       Given an array A of sorted integers and another non negative integer k, find if there exists 2 indices i and j such that A[i]
Correct
                       - A[j] = k, i! = j.
Marked out of
3.00
                       Input Format
\crewtharpoonsep Flag question
                       1. First line is number of test cases T. Following T lines contain:
                       2. N, followed by N integers of the array
                       3. The non-negative integer k
                      Output format
                       Print 1 if such a pair exists and 0 if it doesn't.
```

Source Code

```
Answer: (penalty regime: 0 %)
         #include<stdio.h>
         int main()
             int t;
             scanf("%d",&t);
while(t--)
                  int n;
scanf("%d",&n);
                  int a[n];
for(int i=0;i<n;i++)</pre>
   11
   12
                      scanf("%d",&a[i]);
   13
   14
                  int k;
scanf("%d",&k);
int flag=0;
   15
  16
17
   18
                  for(int i=0;i<n;i++)</pre>
   19
   20
                       for(int j=0;j<i+1;j++)
   21
   22
                            if((a[i]-a[j]==k)||(a[j]-a[i]==k))
                                 flag=1;
   24
   25
                                 break;
  26
27
                            if(flag)
   28
                            break;
   29
   30
                  printf("%d\n",flag);
  32
   33
  34
35
36
             return 0;
```

Result



Question $\bf 2$ Correct Marked out of ₱ Flag question

Sam loves chocolates and starts buying them on the 1st day of the year. Each day of the year, x, is numbered from 1 to Y. On days when x is odd, Sam will buy x chocolates; on days when x is even, Sam will not purchase any chocolates.

Complete the code in the editor so that for each day Ni (where $1 \le x \le N \le Y$) in array arr, the number of chocolates Sam purchased (during days 1 through N) is printed on a new line. This is a function-only challenge, so input is handled for you by the locked stub code in the editor.

Source Code

```
Answer: (penalty regime: 0 %)
        #include<stdio.h>
    2
        int main()
    3 *
        {
            int t;
scanf("%d",&t);
    4
            int a[t];
    6
            for(int i=0;i<t;i++)</pre>
    8
    9
                 scanf("%d",&a[i]);
   10
   11
            for(int i=0;i<t;i++)</pre>
   12 ,
   13
             int sum=0;
             for(int j=1;j<=a[i];j++)</pre>
  14
   15
             if(j%2!=0)
   16
             sum+=j;
             printf("%d\n",sum);
   17
   18
   19
            return 0;
   20
```

Result

```
Input Expected Got
      10
             1296
                        1296
             2500
                        2500
             1849
                        1849
      100
             729
                        729
      86
             400
                        400
             1521
                        1521
      77
                        25
             49
                        49
      13
             2401
                        2401
      98
Passed all tests! 🗸
```

Question 3 Correct Marked out of 7.00 ♥ Flag question

The number of goals achieved by two football teams in matches in a league is given in the form of two lists. Consider:

- Football team A, has played three matches, and has scored { 1, 2, 3 } goals in each match respectively.
- Football team B, has played two matches, and has scored { 2, 4 } goals in each match respectively.
- Your task is to compute, for each match of team B, the total number of matches of team A, where team A has scored less than or equal to the number of goals scored by team $\ensuremath{\mathsf{B}}$ in that match.
- In the above case:
- For 2 goals scored by team B in its first match, team A has 2 matches with scores 1 and 2.
- For 4 goals scored by team B in its second match, team A has 3 matches with scores 1, 2 and 3.

Hence, the answer: {2, 3}.

Source Code

```
Answer: (penalty regime: 0 %)
       #include<stdio.h>
    2
       int main()
    3
    4
            int N,M;
    5
            scanf("%d",&N);
            int num[N];
    6
            for(int i=0;i<N;i++)</pre>
    8
                scanf("%d",&num[i]);
    9
   10
            scanf("%d",&M);
   11
   12
            int max[M];
            for(int i=0;i<M;i++)</pre>
   13
   14
                scanf("%d",&max[i]);
   15
   16
   17
            for(int i=0;i<M;i++)
   18
            {
                int count=0;
   19
   20
                for(int j=0;j<N;j++)</pre>
   21
                     if(num[j]<=max[i])</pre>
   22
   23
   24
                         count++;
                     }
   26
                printf("%d\n",count);
   27
                                                                                       Activate Windows
   28
                                                                                       Go to Settings to activate Windo
   29
            return 0;
   30
```

Result

	Input	Expected	Got	
~	4	2	2	~
	1	4	4	
	2			
	4			
	2			
	5			
~	5	0	1 0	~
	10	3	3	
	5	4	4	
	4			
	8			
	3			
	1			
	7			
	8			
Passed all tests! ✓				