Comprehensive Exam training

Name:M Naveenkumar

1905097

Date:10/06/2021

1.Challenge1

Source code:

```c
#include "stdio.h"
#include "math.h"
int finddistance(x1,x2,y1,y2){
    return sqrt(pow(x2-x1,2)+pow(y2-y1,2));
}
int main(){
    int arr[4][2]={{5,2},{13,4},{6,2},{4,8}};
    int len=sizeof(arr)/sizeof(arr[0]);
    int exploded[4]={0};
    int s=0;
    for (int i = 0; i <3; i++){
        for (int j=i+1; j<4;j++){
            if(finddistance(arr[i][0],arr[j][0],arr[i][1],arr[j][1])<5){
                exploded[i]=1;
                exploded[j]=1;
            }
        }
    }
    for (int i=0;i<4;i++){
        if (exploded[i]==0)s++;
    }
    for (int i=0;i<4;i++){
        if (exploded[i]==1)
            printf("First attempt %d %d\n",arr[i][0],arr[i][1]);
    }
    for (int i=0;i<4;i++){
```
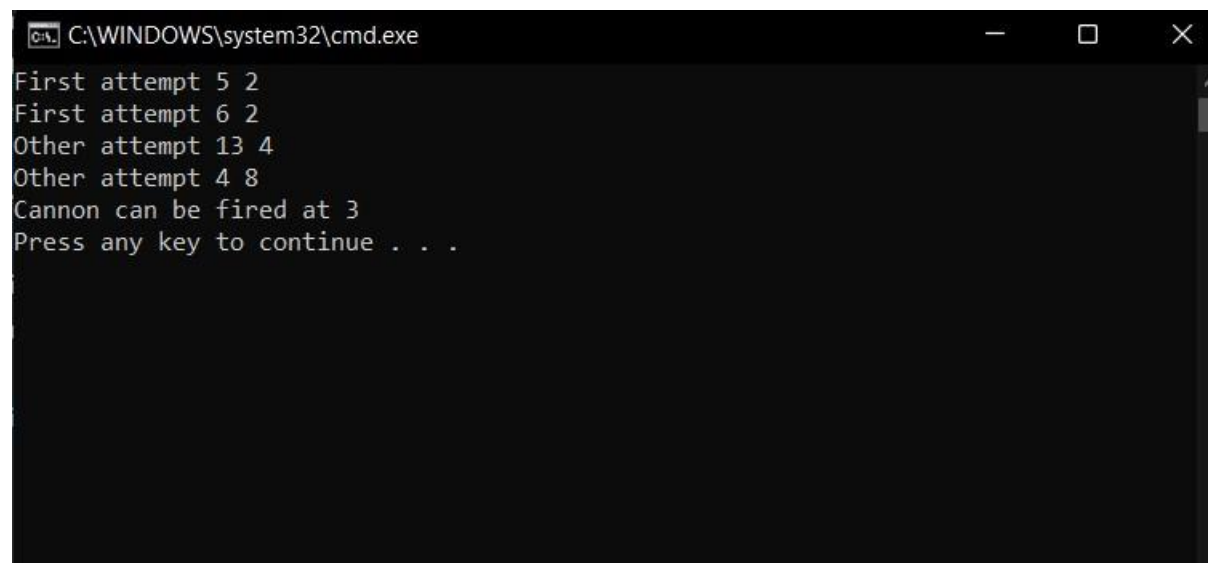
```
        if (exploded[i]==0)
            printf("Other attempt %d %d\n",arr[i][0],arr[i][
1]);
    }
    printf("Cannon can be fired at %d",s+1);

    return 0;
}
```

Output:

```
C:\WINDOWS\system32\cmd.exe                              —    □    ✕
First attempt 5 2
First attempt 6 2
Other attempt 13 4
Other attempt 4 8
Cannon can be fired at 3
Press any key to continue . . .
```

2.Challenge2

Source code:

```
#include "stdio.h"
#include "string.h"

int main(){
    char arr[6][10]={"hello","success","succeed","successful
l"};
    char a[10];
    scanf("%s",a);
    int len=6;
    int wordlen=strlen(a);
    for (int i=0;i<len;i++){
```

```c
        int x=strlen(arr[i]);
        if(wordlen<x){
            int c=0;
            for(int j=0;j<wordlen;j++){
                if(arr[i][j]!=a[j]){
                    c=1;
                    break;
                }
            }
            if(c==0){

                int l=strlen(a);
                int o=strlen(arr[i]);
                int cost=0;
                int v=0;
                if(l>o){
                    cost+=l-o;
                    v=o;
                }
                else{
                    cost+=o-l;
                    int v=l;
                }
                for (int t=0;t<v;t++){
                    if(a[t]!=arr[i][t]){
                        cost++;
                    }
                }
                printf("Word is%s Cost is %d\n",arr[i],cost)
;

            }
        }
    }
}
```

Output:

```
PS D:\Leet code\CEt> & .\"words.exe"
succe
Word issuccess Cost is 2
Word issucceed Cost is 2
Word issuccessful Cost is 5
PS D:\Leet code\CEt>
```