4. (b) Test 4

Test Summary

- No. of Sections: 1
- No. of Questions: 3
- Total Duration: 30 min

Section 1 - Coding Proficiency 4

Section Summary

- No. of Questions: 3
- Duration: 30 min

Additional Instructions:

None

Q1. **ESSAY WRITING**

Write a response explaining the pros and cons of the arms race. Do the benefits outweigh the risks? Provide examples.

Directions

In the nuclear age, the production and development of weaponry challenge the very existence of humankind. How useful are weapons? Do the benefits outweigh the risks?

Keywords

Q2. **Reverse the String**
Write a program to reverse the string

Input Format

Input contains the string

Output Format

print the altered string

Constraints

1<=length <= 1000

Sample Input

```
Aesops fable of the Tortoise and the Hare. When a wolf
```

Sample Output

```
.slamina tserof eht lla gnitae si noil a .mih seveileb
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Q3. **Target Value in 2D**
Find a target value in a two-dimensional matrix given the number of rows as rowCount and number of columns as columnCount, and return its coordinates. If the value didn't exist, the program had to return (-1,-1).

Input Format

Input contains rowCount , columnCount, values and the target value

Output Format

If the value didn't exist, print **-1 -1** else print its coordinates

Constraints

1 ≤ array_size ≤ 1000

Sample Input

```
3 4
1 2 3 4
5 6 7 8
```

Sample Output

```
(1,2)
```

Time Limit: - ms Memory Limit: - kb Code Size: - kb

Answer Key & Solution

Section 1 - Coding Proficiency 4

Q1

Sample Essay

No Essay

Keywords

NUCLEAR AGE, PRODUCTION, DEVELOPMENT, WEAPONRY, CHALLENGE, EXISTENCE, HUMANKIND, USEFUL, WEAPONS, BENEFITS, OUTWEIGH, RISKS,

Q2

Test Case

Input

```
Little readers learn to overcome bad habits with
```

Output

```
naM dlO esiW ehT htiw stibah dab emocrevo ot nrae
```

Weightage - 5

Input

```
.slamina tserof eht lla gnitae si noil a .mih sev
```

Output

```
Little readers learn to overcome bad habits with
```

Weightage - 10

Input

```
India Gate is without a doubt one of the most rec
```

Output

```
ti no devrac srytram naidnI eht fo eman htiw thgi
```

Weightage - 10

Input

```
Rich history and gold gilded exterior are the higl
```

Output

```
elpmet nedloG sa eman a ti denrae taht kool a ti
```

Weightage - 10

Input

```
The monument Hawa Mahal, was built Maharaja Sawai
404 This 16th century Charminar monument in Hyder
405 Meenakshi Temple is said to have the finest
```

Output

```
rehto eht yb nees eb ot gnivah tuohtiw dlrow edis
```

Weightage - 10

Input

Output

rehto eht yb nees eb ot gnivah tuohtiw dlrow edis	Meenakshi Temple is said to have the finest India

Weightage - 10

Input	Output
elpmet nedloG sa eman a ti denrae taht kool a ti	The lower level of the temple is adorned with mot

Weightage - 10

Input	Output
rewop gnilaeh evah ot dias si taht dnop suomaf a	Built by Arjan Sahib with help of Baba Budha Ji,

Weightage - 10

Input	Output
msiruot saidnI ni ecnatropmi taerg a deniag sah e	Rich history and gold gilded exterior are the hig

Weightage - 10

Input	Output
children not to underestimate themselves.a man tri	.tac a eucser ot seirt nam a.sevlesmeht etamitsere

Weightage - 5

Input	Output
yrtnuoc eht fo serutcurts elbazingocer tsom eht fo	India Gate stands 42m tall in height with name of

Weightage - 10

Sample Input	Sample Output
Aesops fable of the Tortoise and the Hare. When a	.slamina tserof eht lla gnitae si noil a .mih sev

Solution

```c
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>
#include <malloc.h>
```

```c
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>
#include <malloc.h>
```

```
int main()
 {
    char temp;
    char str[1000];
    int length,start=0,end,test,ctr;

    //for(ctr=1;ctr<=test;ctr++)
    //{


    scanf("%[^\n]s",str);
        start=0;
  //printf("%s",str);
  end=strlen(str)-1;
    while(start<end)
    {
        temp=str[start];
        str[start]=str[end];
        str[end]=temp;
        start++;
        end--;
    }
     printf("%s",str);
     //free(str);
    // }
     return 0;
  }
```

```
int main()
 {
    char temp;
    char str[1000];
    int length,start=0,end,test,ctr;

    //for(ctr=1;ctr<=test;ctr++)
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    scanf("%[^\n]s",str);
        start=0;
  //printf("%s",str);
  end=strlen(str)-1;
    while(start<end)
    {
        temp=str[start];
        str[start]=str[end];
        str[end]=temp;
        start++;
        end--;
    }
     printf("%s",str);
     //free(str);
    // }
     return 0;
  }
```

Q3

Test Case

Input

```
3 3
0 1 0
1 0 1
0 1 0
```

Output

```
(-1,-1)
```

Weightage - 10

Input

```
5 5
45 23 57 32 79
78 87 2  44 93
4  9  3  34 12
```

Output

```
(4,1)
```

Weightage - 10

Input

```
5 4
12 90 23 89
34 78 45 67
98 21 9 3
```

Output

```
(2,1)
```

Weightage - 10

Input

```
10 10
940 1597 1843 3741 5029 5626 6106 6437 7112 7248
 783 1065 2044 3519 5200 5346 7581 8212 9612 993
```

Output

```
(3,7)
```

Weightage - 10

Input

```
5 10
921 1558 2343 2976 5172 5423 5627 6003 7145 9341
166 1553 2100 2413 4013 4860 7904 8526 8670 8740
```

Output

```
(0,0)
```

Weightage - 10

Input

```
10 10
985 8896 8382 8914 1664 4128 7771 4148 3097 1704
2047 1332 7604 2755 9089 511 7305 350 8392 5839
```

Output

```
(-1,-1)
```

Weightage - 10

Input

```
8 10
7875 2585 7818 7302 5822 3692 33 2525 517 5699
 4852 1995 8781 3608 5527 7245 1579 5241 2385 73
```

Output

```
(7,9)
```

Weightage - 10

Input

```
 8 10
5220 6532 6486 1494 8800 9969 9293 871 4947 4425
 5423 99 5685 6094 9134 2287 8255 4320 9964 4504
```

Output

```
(5,9)
```

Weightage - 10

Input

```
5 5
5016 7919 5101 6931 7363
1301 758 3366 3203 139
```

Output

```
(-1,-1)
```

Weightage - 10

Input

```
2 3
10 20 30
40 50 60
100
```

Output

```
(-1,-1)
```

Weightage - 10

Sample Input

```
3 4
1 2 3 4
5 6 7 8
9 10 11 12
```

Sample Output

```
(1,2)
```

Solution

```c
#include<stdio.h>
int main()
{
   int arr[1000][1000];
   int row,col,rSize,cSize,searchValue;
   scanf("%d %d",&rSize,&cSize);
   for( row = 0 ; row < rSize  ; row++)
   {
     for(col = 0 ; col < cSize ; col++)
          scanf("%d",&arr[row][col]);
   }
   scanf("%d",&searchValue);
   for( row = 0 ; row < rSize  ; row++)
   {
     for(col = 0 ; col < cSize ; col++)
     {
         if(arr[row][col] == searchValue)
         {
              printf("(%d,%d)",row,col);
              break;
         }
     }
     if(col <cSize)  break;
  }
  if(row == rSize)
      printf("(-1,-1)");
 return 0;
}
```

```c
#include<stdio.h>
int main()
{
   int arr[1000][1000];
   int row,col,rSize,cSize,searchValue;
   scanf("%d %d",&rSize,&cSize);
   for( row = 0 ; row < rSize  ; row++)
   {
     for(col = 0 ; col < cSize ; col++)
          scanf("%d",&arr[row][col]);
   }
   scanf("%d",&searchValue);
   for( row = 0 ; row < rSize  ; row++)
   {
     for(col = 0 ; col < cSize ; col++)
     {
         if(arr[row][col] == searchValue)
         {
              printf("(%d,%d)",row,col);
              break;
         }
     }
     if(col <cSize)  break;
  }
  if(row == rSize)
      printf("(-1,-1)");
 return 0;
}
```