CSE 306: Algorithms Lab (Sec-1)
Department of Computer Science and Engineering
University of Liberal Arts Bangladesh

Course Title: Algorithms Lab   **Course Code:** CSE 306
Total Marks: 15   **Time:** 40 minutes

Name: _____   **ID:** _____

1. Consider the following code: 10

```c
#include <stdio.h>

#define  MAX_SIZE 7

int arr[MAX_SIZE] = {10, 80, 30, 90, 40, 50, 70};

int partition(int pivot_index)
{
        int pivot = arr[pivot_index];

        int smaller_index = 0;

        // write your solution here

        return  smaller_index;
}

int main()
{
        int pivot_index;
        scanf("%d" & pivot_index);
        printf("%d\n", partition(pivot_index));

        return 0;
}
```

Complete the function `partition` that places the `pivot` element at its position if the array was sorted. Place all the smaller elements to the left of the `pivot` and put all the greater elements to the right of the `pivot`. Return the updated index of the `pivot`.

SAMPLE INPUT	SAMPLE OUTPUT
6	4

2. Interview   5