UE24CS151B (LAB) : Problem Solving With C integrated with Lab Week-8 Solutions

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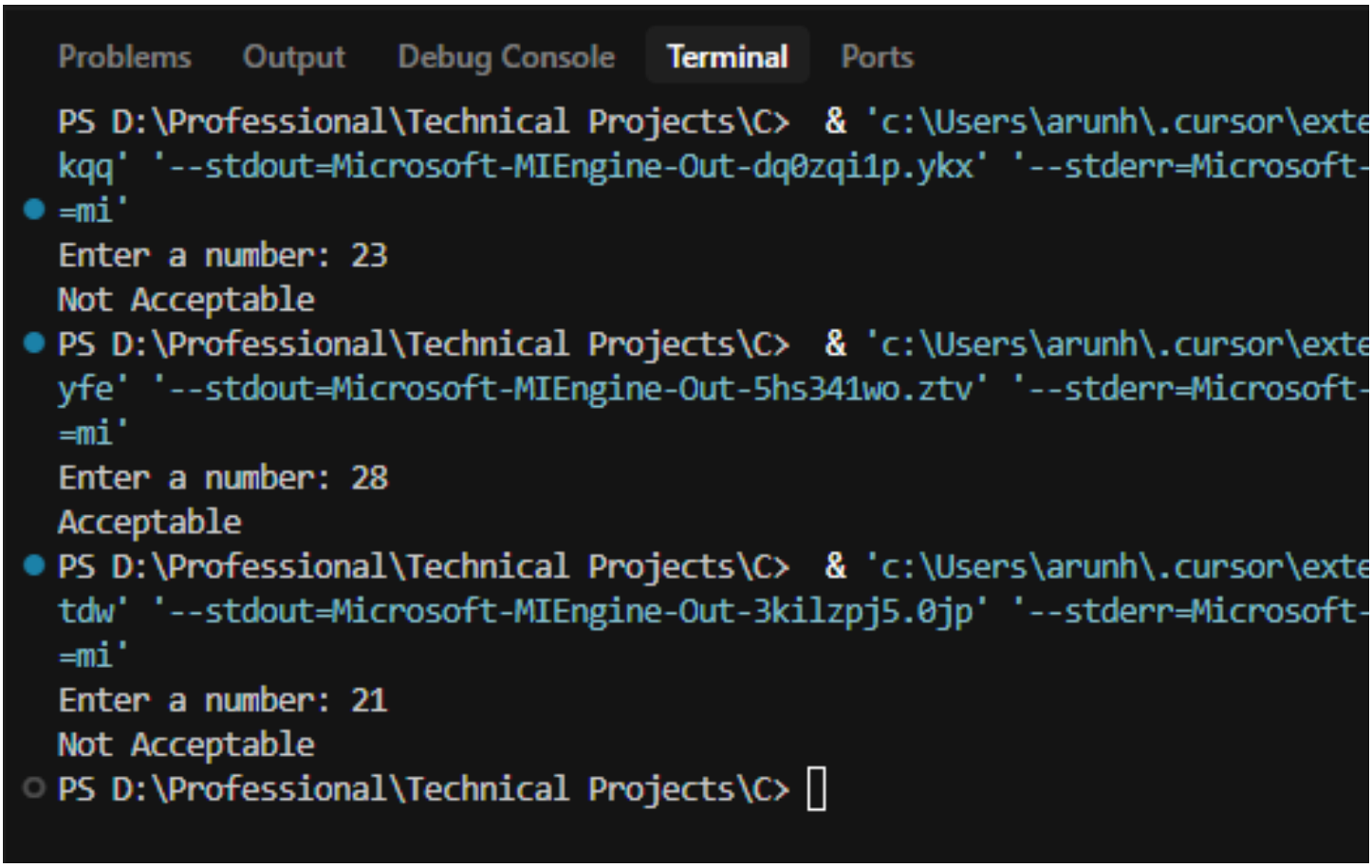
Section: M

Code 1:

```
#include <stdio.h>


int main() {
    int number;


    printf("Enter a number: ");
    scanf("%d", &number);
    if ((number % 3 == 0 || number % 7 == 0) && !(number % 3 == 0 && number % 7 == 0)) {
        printf("Acceptable\n");
    } else {
        printf("It is unacceptoble, tell them it is unacceptoble -Carlos Sainz\n");
    }


    return 0;
}
```

Solution:

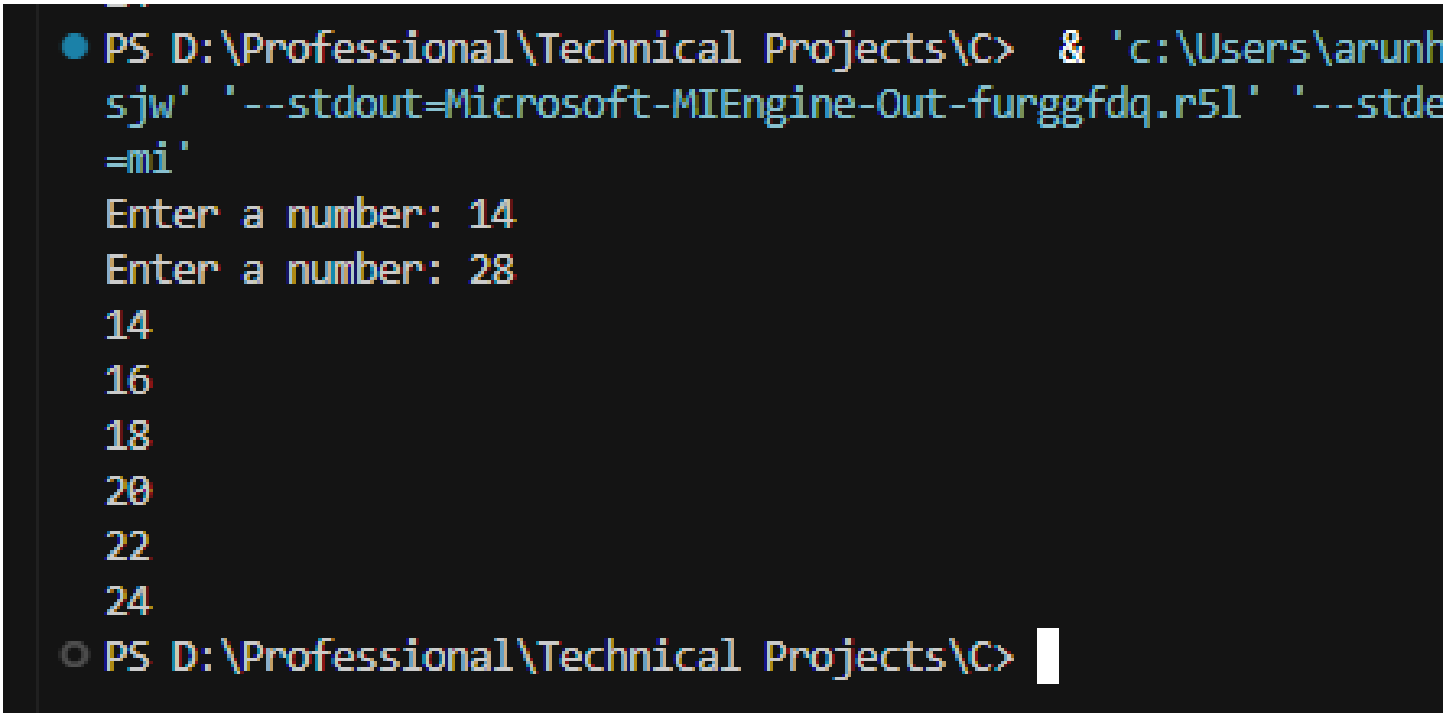


Code 2:

```
#include <stdio.h>


int main() {
    int start, end;
    printf("Enter a number: ");
    scanf("%d", &start);
    printf("Enter a number: ");
    scanf("%d", &end);
    if (start > end) {
        int temp = start;
        start = end;
        end = temp;
    }
```

```
    for (int i = start; i <= end; i++) {
        if(i%13 == 0) {
            break;
        }

        if(i % 2 == 0) {
            printf("%d\n", i);
        }
    }
    return 0;
}
```

Solution:



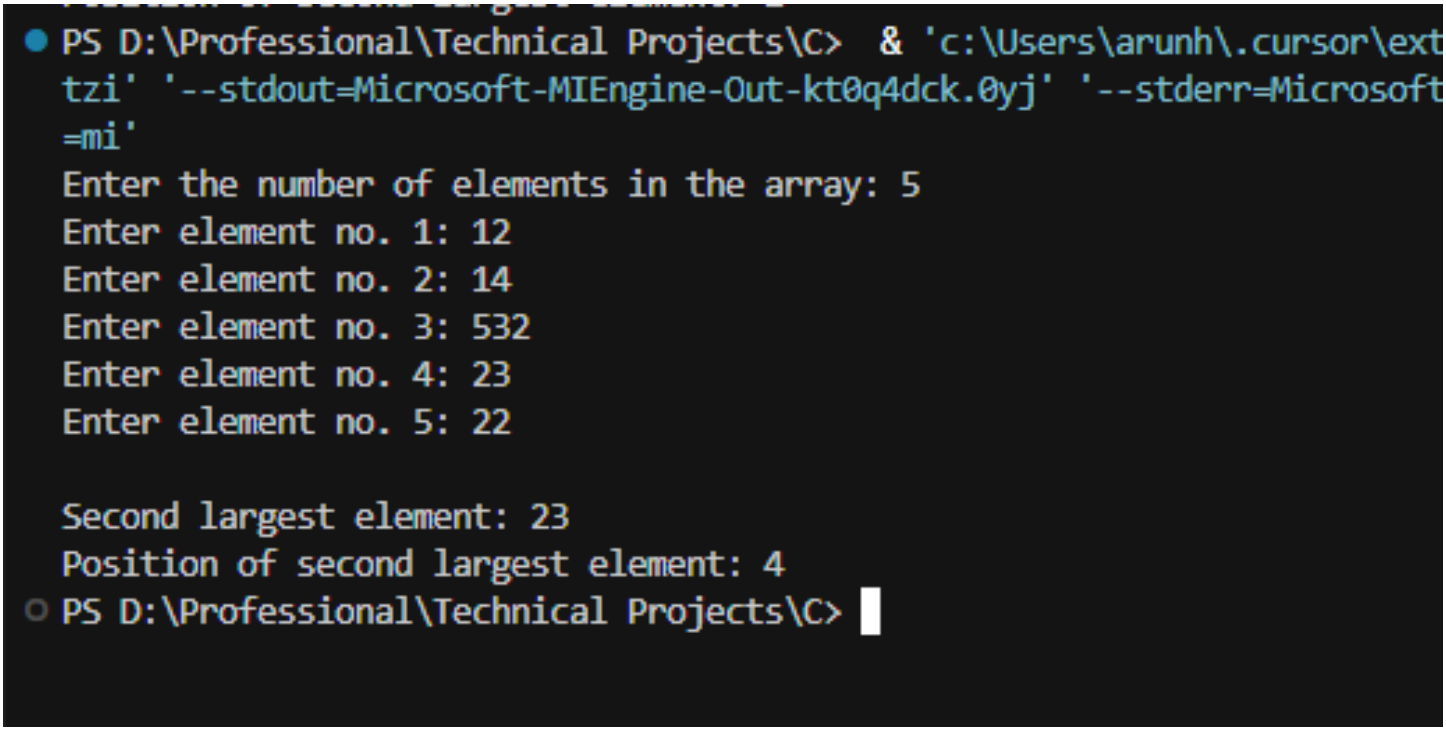
Code 3:

```
#include <stdio.h>

void second_largest(int arr[], int n) {
    int largest = arr[0];
    int second_largest = arr[0];
```

```
    int largest_pos = 0;
    int second_largest_pos = 0;

    for (int i = 0; i < n; i++) {
        if (arr[i] > largest) {
            second_largest = largest;
            second_largest_pos = largest_pos;
            largest = arr[i];
            largest_pos = i;
        }
        else if (arr[i] > second_largest && arr[i] != largest) {
            second_largest = arr[i];
            second_largest_pos = i;
        }
    }

    printf("\nSecond largest element: %d\n", second_largest);
    printf("Position of second largest element: %d\n", second_largest_pos+1);
}

int main() {
    int arr[100];
    int n;
    printf("Enter the number of elements in the array: ");
    scanf("%d", &n);
    for (int i = 0; i < n; i++) {
        printf("Enter element no. %d: ", i+1);
```

```
        scanf("%d", &arr[i]);
    }
    second_largest(arr, n);
    return 0;
}
```

Solution:



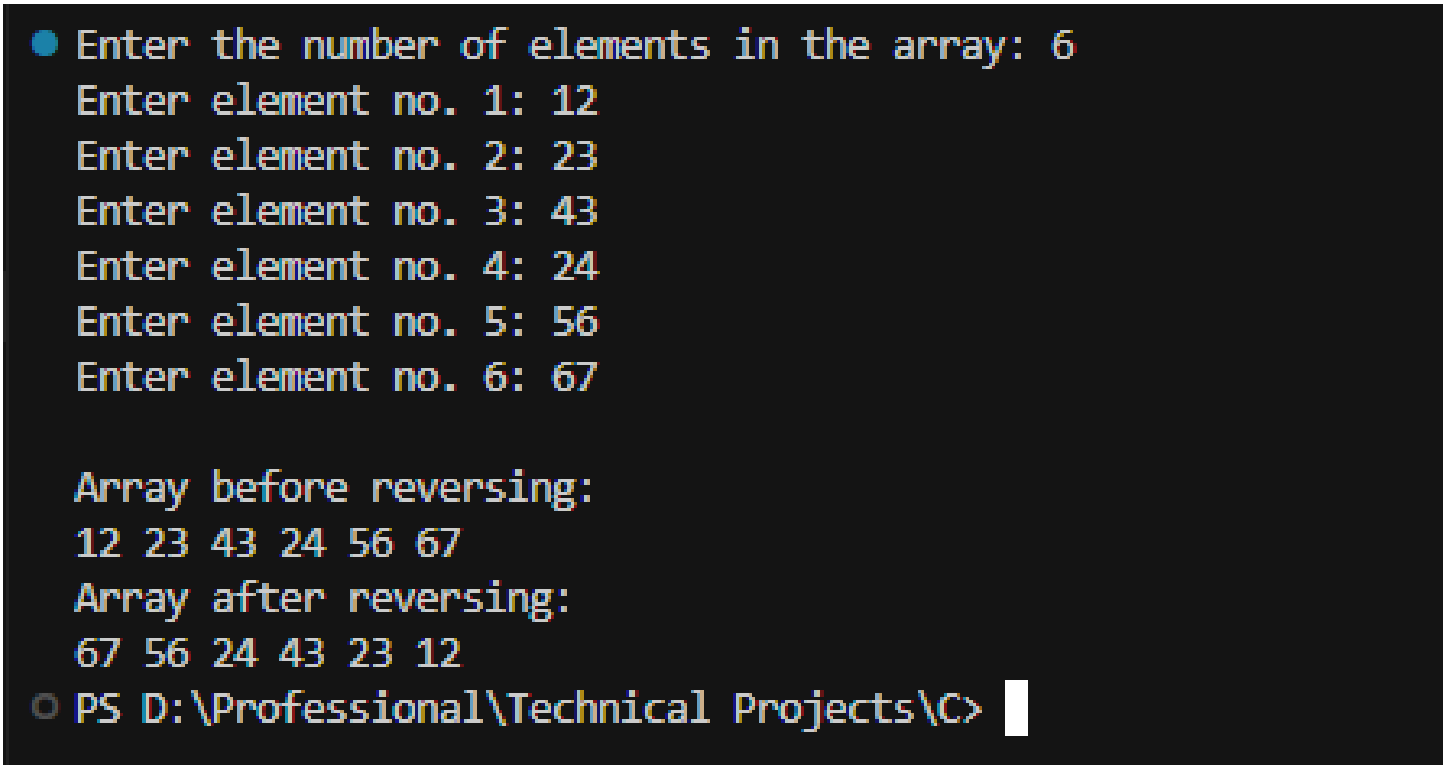
Code 4:

```
#include <stdio.h>


void reverse_array(int *arr, int n) {
    int *start = arr;
    int *end = arr + n - 1;
    int temp;

    while (start < end) {
        temp = *start;
```

```
        *start = *end;
        *end = temp;
        start++;
        end--;
    }
}

int main() {
    int arr[100];
    int n;
    printf("Enter the number of elements in the array: ");
    scanf("%d", &n);
    for (int i = 0; i < n; i++) {
        printf("Enter element no. %d: ", i+1);
        scanf("%d", &arr[i]);
    }

    printf("\nArray before reversing:\n");
    for (int i = 0; i < n; i++) {
        printf("%d ", arr[i]);
    }

    reverse_array(arr, n);

    printf("\nArray after reversing:\n");
    for (int i = 0; i < n; i++) {
        printf("%d ", arr[i]);
```

```
    }

    printf("\n");


    return 0;

}
```

Solution:



Code 5:

```
#include <stdio.h>


void printDigitInWord(int n) {

    if (n < 0) {

        printf("Negative ");

        printDigitInWord(-n);

        return;

    }
```

```
    if (n < 10) {
        switch(n) {
            case 0: printf("Zero"); break;
            case 1: printf("One"); break;
            case 2: printf("Two"); break;
            case 3: printf("Three"); break;
            case 4: printf("Four"); break;
            case 5: printf("Five"); break;
            case 6: printf("Six"); break;
            case 7: printf("Seven"); break;
            case 8: printf("Eight"); break;
            case 9: printf("Nine"); break;
        }
    } else {
        printDigitInWord(n / 10);
        printf(" ");
        printDigitInWord(n % 10);
    }
}

int main() {
    int num;
    printf("Enter a number: ");
    scanf("%d", &num);

    printf("Number in words: ");
    printDigitInWord(num);
```

```
    printf("\n");


    return 0;

}
```

Solution: