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Class & Section:BSC-1K

TASK #4:

```c
#include <stdio.h>

int main() {
    int scores[10] = {55, 72, 68, 91, 47, 85, 77, 64, 58, 80};
    int temp, i, j;
    float median;

    for(i = 0; i < 9; i++) {
        for(j = i + 1; j < 10; j++) {
            if(scores[i] > scores[j]) {
                temp = scores[i];
                scores[i] = scores[j];
                scores[j] = temp;
            }
        }
    }

    printf("Sorted scores: ");
    for(i = 0; i < 10; i++)
        printf("%d ", scores[i]);

    median = (scores[4] + scores[5]) / 2.0;

    printf("\nMedian score = %.2f\n", median);
    return 0;
}
```

```
Sorted scores: 47 55 58 64 68 72 77 80 85 91
Median score = 70.00


...Program finished with exit code 0
Press ENTER to exit console.
```

TASK #5:

```c

#include <stdio.h>

int main() {
    int grades[10] = {78, 65, 90, 82, 56, 88, 92, 71, 63, 80};
    int i, sum = 0, max = grades[0], min = grades[0];
    int maxIndex = 0, minIndex = 0;

    printf("Grades: ");
    for(i = 0; i < 10; i++) {
        printf("%d ", grades[i]);
        sum += grades[i];
        if(grades[i] > max) {
            max = grades[i];
            maxIndex = i;
        }
        if(grades[i] < min) {
            min = grades[i];
            minIndex = i;
        }
    }

    float avg = sum / 10.0;
    printf("\nAverage Grade = %.2f", avg);
    printf("\nHighest Grade = %d (Index %d)", max, maxIndex);
    printf("\nLowest Grade = %d (Index %d)", min, minIndex);


    printf("\n\nUpdating lowest grade...\n");
    grades[minIndex] = 75;

    printf("Updated Grades: ");
    for(i = 0; i < 10; i++)
        printf("%d ", grades[i]);

    printf("\n");
    return 0;
}
```

```
Grades: 78 65 90 82 56 88 92 71 63 80
Average Grade = 76.50
Highest Grade = 92 (Index 6)
Lowest Grade = 56 (Index 4)

Updating lowest grade...
Updated Grades: 78 65 90 82 75 88 92 71 63 80


...Program finished with exit code 0
Press ENTER to exit console.
```

TASK#6:

```c

#include <stdio.h>

int main() {
    int num[5], result[5][3];
    int i;

    printf("Enter 5 numbers: ");
    for(i = 0; i < 5; i++)
        scanf("%d", &num[i]);

    for(i = 0; i < 5; i++) {
        result[i][0] = num[i] + 10;
        result[i][1] = num[i] - 5;
        result[i][2] = num[i] * 2;
    }

    printf("\nNumber | +10 | -5 | *2\n");
    for(i = 0; i < 5; i++)
        printf("%6d | %3d | %2d | %2d\n", num[i], result[i][0], result[i][1], result[i][2]);

    return 0;
}

```

```
Enter 5 numbers: 4
6
8
7
2

Number | +10 | -5 | *2
     4 |  14 | -1 |  8
     6 |  16 |  1 | 12
     8 |  18 |  3 | 16
     7 |  17 |  2 | 14
     2 |  12 | -3 |  4


...Program finished with exit code 0
Press ENTER to exit console.
```

TASK #7:

```c

#include <stdio.h>

int main() {
    int ids[10], i, j, value, n = 10;

    printf("Enter 10 product IDs (3 digits): ");
    for(i = 0; i < n; i++)
        scanf("%d", &ids[i]);

    printf("Enter product ID to remove: ");
    scanf("%d", &value);

    for(i = 0; i < n; i++) {
        if(ids[i] == value) {
            for(j = i; j < n - 1; j++)
                ids[j] = ids[j + 1];
            n--;
            i--;
        }
    }

    printf("Updated list of product IDs: ");
    for(i = 0; i < n; i++)
        printf("%d ", ids[i]);

    printf("\n");
    return 0;
}

```

```
Enter 10 product IDs (3 digits): 10
3
5
8
9
4
3
6
2
8
Enter product ID to remove: 9
Updated list of product IDs: 10 3 5 8 4 3 6 2 8

...Program finished with exit code 0
Press ENTER to exit console.
```

TASK#8:

```c

#include <stdio.h>
#include <ctype.h>

int main() {
    char str[100];
    int i;

    printf("Enter a string: ");
    gets(str);

    for(i = 0; str[i] != '\0'; i++) {
        if(strchr("aeiou", str[i]))
            str[i] = toupper(str[i]);
    }

    printf("Modified string: %s\n", str);
    return 0;
}

```

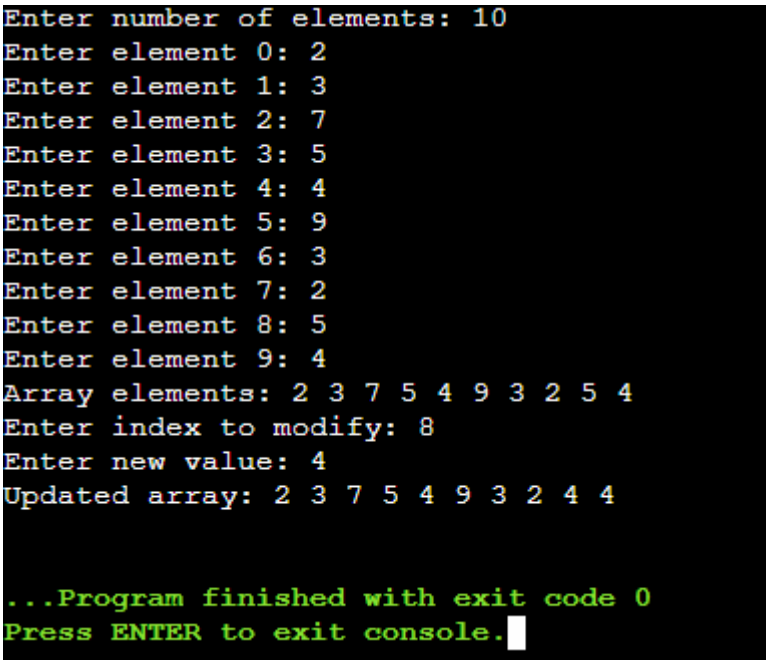
TASK #9:

```c

#include <stdio.h>

int main() {
    int arr1[5], arr2[5], merged[10];
    int i, j;

    printf("Enter 5 elements for first array: ");
    for(i = 0; i < 5; i++)
        scanf("%d", &arr1[i]);

    printf("Enter 5 elements for second array: ");
    for(i = 0; i < 5; i++)
        scanf("%d", &arr2[i]);

    for(i = 0; i < 5; i++)
        merged[i] = arr1[i];

    for(j = 0; j < 5; j++)
        merged[i + j] = arr2[j];

    printf("Merged array: ");
    for(i = 0; i < 10; i++)
        printf("%d ", merged[i]);

    printf("\n");
    return 0;
}

```

```
Enter 5 elements for first array: 4
8
3
9
5
Enter 5 elements for second array: 4
8
7
5
3
Merged array: 4 8 3 9 5 4 8 7 5 3


...Program finished with exit code 0
Press ENTER to exit console.
```

TASK#10:

```c
#include <stdio.h>

int main() {
    int n, i, index, newValue;

    printf("Enter number of elements: ");
    scanf("%d", &n);

    int arr[n];

    for(i = 0; i < n; i++) {
        printf("Enter element %d: ", i);
        scanf("%d", &arr[i]);
    }

    printf("Array elements: ");
    for(i = 0; i < n; i++)
        printf("%d ", arr[i]);

    printf("\nEnter index to modify: ");
    scanf("%d", &index);

    if(index >= 0 && index < n) {
        printf("Enter new value: ");
        scanf("%d", &newValue);
        arr[index] = newValue;
    }

    printf("Updated array: ");
    for(i = 0; i < n; i++)
        printf("%d ", arr[i]);

    printf("\n");
    return 0;
}
```


Enter number of elements: 10
Enter element 0: 2
Enter element 1: 3
Enter element 2: 7
Enter element 3: 5
Enter element 4: 4
Enter element 5: 9
Enter element 6: 3
Enter element 7: 2
Enter element 8: 5
Enter element 9: 4
Array elements: 2 3 7 5 4 9 3 2 5 4
Enter index to modify: 8
Enter new value: 4
Updated array: 2 3 7 5 4 9 3 2 4 4
...Program finished with exit code 0
Press ENTER to exit console.