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Ex_1.c Ex_2.c Ex_3.c Ex_4.c Ex_5.c Console
1 /*
2  * Ex_1.c
3  * Created on: Aug 1, 2021
4  * Author : Sarah
5  */
6
7
8 #include <stdio.h>
9
10 int main(){
11     setvbuf(stdout, NULL, _IONBF, 0);
12     setvbuf(stderr, NULL, _IONBF, 0);
13     float A[2][2], B[2][2];
14     printf("Enter the elements of 1st matrix\n");
15     for(int i = 0; i < 2; i++){
16         for(int j = 0; j < 2; j++){
17             printf("Enter a%d%d: ", i + 1, j + 1);
18             scanf("%f", &A[i][j]);
19         }
20     }
21     printf("Enter the elements of 2nd matrix\n");
22     fflush(stdout);
23     fflush(stdin);
24     for(int i = 0; i < 2; i++){
25         for(int j = 0; j < 2; j++){
26             printf("Enter b%d%d: ", i + 1, j + 1);
27             scanf("%f", &B[i][j]);
28             B[i][j] += A[i][j];
29         }
30     }
31     printf("Sum of matrix:\n");
32     for(int i = 0; i < 2; i++){
33         for(int j = 0; j < 2; j++){
34             printf("%.1f ", B[i][j]);
35         }
36         printf("\n");
37     }
38     return 0;
39 }
40
```

```
<terminated> (exit value: 0) Ex_1.exe [C/C++ Application]
Enter the elements of 1st matrix
Enter a11: 2
Enter a12: 0.5
Enter a21: -1.1
Enter a22: 2
Enter the elements of 2nd matrix
Enter b11: 0.2
Enter b12: 0
Enter b21: 0.23
Enter b22: 23
Sum of matrix:
2.2 0.5
-0.9 25.0
```

```
Ex_1.c Ex_2.c Ex_3.c Ex_4.c Ex_5.c Console
1 /*
2  * Ex_2.c
3  * Created on: Aug 1, 2021
4  * Author : Sarah
5  */
6
7
8 #include <stdio.h>
9
10 int main(){
11     setvbuf(stdout, NULL, _IONBF, 0);
12     setvbuf(stderr, NULL, _IONBF, 0);
13     float data[100], average = 0;
14     int size;
15     printf("Enter the numbers of data: ");
16     scanf("%d", &size);
17     for(int i = 0; i < size; i++){
18         printf("%d. Enter number: ", i + 1);
19         scanf("%f", &data[i]);
20         average += data[i] / size;
21     }
22     printf("Average = %.2f", average);
23     return 0;
24 }
25
```

<terminated> (exit value: 0) Ex_2.exe [C/C++ Application]
Enter the numbers of data: 6
1. Enter number: 45.3
2. Enter number: 67.5
3. Enter number: -45.6
4. Enter number: 20.34
5. Enter number: 33
6. Enter number: 45.6
Average = 27.69

```
Ex_1.c Ex_2.c Ex_3.c Ex_4.c Ex_5.c Console
1 /*
2  * Ex_3.c
3  * Created on: Aug 1, 2021
4  * Author : Sarah
5  */
6
7
8 #include <stdio.h>
9
10 int main(){
11     setvbuf(stdout, NULL, _IONBF, 0);
12     setvbuf(stderr, NULL, _IONBF, 0);
13     int a[50][50];
14     int rows, columns;
15     printf("Enter rows and columns of matrix: ");
16     scanf("%d %d", &rows, &columns);
17     printf("\nEnter elements of matrix:\n");
18     for(int i = 0; i < rows; i++){
19         for(int j = 0; j < columns; j++){
20             printf("Enter elements a%d%d: ", i + 1, j + 1);
21             scanf("%d", &a[i][j]);
22         }
23     }
24     printf("\nEnter Matrix:\n");
25     for(int i = 0; i < rows; i++){
26         for(int j = 0; j < columns; j++){
27             printf("%d ", a[i][j]);
28         }
29         printf("\n");
30     }
31     printf("\nTranspose of Matrix:\n");
32     for(int i = 0; i < columns; i++){
33         for(int j = 0; j < rows; j++){
34             printf("%d ", a[j][i]);
35         }
36         printf("\n");
37     }
38     return 0;
39 }
40
```

<terminated> (exit value: 0) Ex_3.exe [C/C++ Application]
Enter rows and columns of matrix: 2
3

Enter elements of matrix:
Enter elements a11: 1
Enter elements a12: 2
Enter elements a13: 9
Enter elements a21: 0
Enter elements a22: 4
Enter elements a23: 7

Entered Matrix:
1 2 9
0 4 7

Transpose of Matrix:
1 0
2 4
9 7

```
Ex_4.c Ex_5.c Console
1 /*
2  * Ex_4.c
3  * Created on: Aug 1, 2021
4  * Author : Sarah
5  */
6
7
8 #include <stdio.h>
9
10 int main(){
11     setvbuf(stdout, NULL, _IONBF, 0);
12     setvbuf(stderr, NULL, _IONBF, 0);
13     int data[100], num, location, size;
14     printf("Output of Program: \n\n");
15     printf("Enter no of elements: ");
16     scanf("%d", &size);
17     for(int i = 0; i < size; i++){
18         scanf("%d", &data[i]);
19     }
20     printf("Enter the element to be inserted: ");
21     scanf("%d", &num);
22     printf("Enter the location: ");
23     scanf("%d", &location);
24     for(int i = size; i >= location - 1; i--){
25         data[i] = data[i - 1];
26     }
27     data[location - 1] = num;
28     for(int i = 0; i <= size; i++){
29         printf("%d ", data[i]);
30     }
31     return 0;
32 }
33
```

<terminated> (exit value: 0) Ex_4.exe [C/C++ Application]
Output of Program:
Enter no of elements: 5
1 2 3 4 5
Enter the element to be inserted: 6
Enter the location: 2
1 6 2 3 4 5

```
Ex_5.c Console
1 /*
2  * Ex_5.c
3  * Created on: Aug 1, 2021
4  * Author : Sarah
5  */
6
7
8 #include <stdio.h>
9
10 int main(){
11     setvbuf(stdout, NULL, _IONBF, 0);
12     setvbuf(stderr, NULL, _IONBF, 0);
13     int data[100], size, num, index;
14     printf("Enter no of elements: ");
15     scanf("%d", &size);
16     for(int i = 0; i < size; i++){
17         scanf("%d", &data[i]);
18     }
19     printf("Enter the element to be searched: ");
20     scanf("%d", &num);
21     for(int i = 0; i < size; i++){
22         if(num == data[i]){
23             index = i + 1;
24             printf("Number found at the location = %d", index);
25             return 0;
26         }
27     }
28     printf("the number isn't found :(");
29
30     return 0;
31 }
32
```

<terminated> (exit value: 0) Ex_5.exe [C/C++ Application]
Enter no of elements: 5
11 22 33 44 55
Enter the element to be searched: 44
Number found at the location = 4

```
Ex_5.c Console
1 /*
2  * Ex_5.c
3  * Created on: Aug 1, 2021
4  * Author : Sarah
5  */
6
7
8 #include <stdio.h>
9
10 int main(){
11     setvbuf(stdout, NULL, _IONBF, 0);
12     setvbuf(stderr, NULL, _IONBF, 0);
13     int data[100], size, num, index;
14     printf("Enter no of elements: ");
15     scanf("%d", &size);
16     for(int i = 0; i < size; i++){
17         scanf("%d", &data[i]);
18     }
19     printf("Enter the element to be searched: ");
20     scanf("%d", &num);
21     for(int i = 0; i < size; i++){
22         if(num == data[i]){
23             index = i + 1;
24             printf("Number found at the location = %d", index);
25             return 0;
26         }
27     }
28     printf("the number isn't found :(");
29
30     return 0;
31 }
32
```

<terminated> (exit value: 0) Ex_5.exe [C/C++ Application]
Enter no of elements: 5
11 22 33 44 55
Enter the element to be searched: 0
the number isn't found :(