Submission

Practical 6 to 7

Module Code

CS102.3

Module Name

Programming with C language

Student Name

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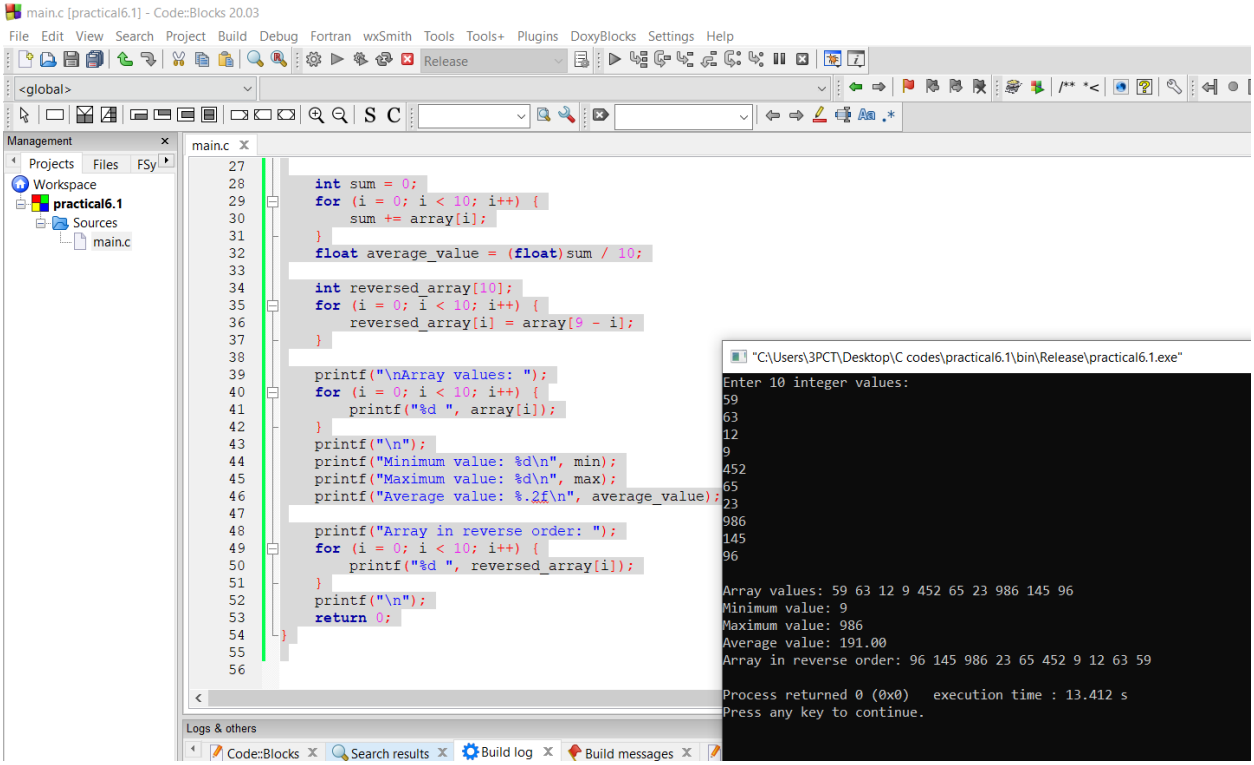
Practical 6

Q1)

```
#include <stdio.h>
#include <stdlib.h>

int main()
{
   int array[10];
   int i;

   printf("Enter 10 integer values:\n");
   for (i = 0; i < 10; i++) {
      scanf("%d", &array[i]);
   }

   int min = array[0];
   for (i = 1; i < 10; i++) {
      if (array[i] < min) {
         min = array[i];
      }
   }

   int max = array[0];
   for (i = 1; i < 10; i++) {
      if (array[i] > max) {
         max = array[i];
      }
   }

   int sum = 0;
   for (i = 0; i < 10; i++) {
      sum += array[i];
   }
   float average_value = (float)sum / 10;

   int reversed_array[10];
   for (i = 0; i < 10; i++) {
      reversed_array[i] = array[9 - i];
   }

   printf("\nArray values: ");
   for (i = 0; i < 10; i++) {
      printf("%d ", array[i]);
   }
   printf("\n");
   printf("Minimum value: %d\n", min);
```

```
    printf("Maximum value: %d\n", max);
    printf("Average value: %.2f\n", average_value);

    printf("Array in reverse order: ");
    for (i = 0; i < 10; i++) {
        printf("%d ", reversed_array[i]);
    }
    printf("\n");
    return 0;
}
```



Q2)
```c
#include <stdio.h>
#include <stdlib.h>

int main()
{
   int size;
   printf("Enter the size of the arrays: ");
   scanf("%d", &size);

   int array1[size], array2[size], vector_sum[size];
   int scalar_sum = 0;
   int i;

   printf("Enter %d integer values for array1:\n", size);
   for (i = 0; i < size; i++) {
      scanf("%d", &array1[i]);
   }

   printf("Enter %d integer values for array2:\n", size);
   for (i = 0; i < size; i++) {
      scanf("%d", &array2[i]);
   }

   for (i = 0; i < size; i++) {
      scalar_sum += array1[i];
   }

   for (i = 0; i < size; i++) {
      vector_sum[i] = array1[i] + array2[i];
   }

   printf("\nScalar Sum: %d\n", scalar_sum);

   printf("Vector Sum:\n");
   for (i = 0; i < size; i++) {
      printf("%d ", vector_sum[i]);
   }
   printf("\n");

   return 0;
}
```

Practical 7

Q1)

```
#include <stdio.h>
#define ROWS 3
#define COLS 3

void inputMatrix(int matrix[ROWS][COLS]) {
   for (int i = 0; i < ROWS; i++) {
      for (int j = 0; j < COLS; j++) {
         scanf("%d", &matrix[i][j]);
      }
   }
}

void displayMatrix(int matrix[ROWS][COLS]) {
   for (int i = 0; i < ROWS; i++) {
      for (int j = 0; j < COLS; j++) {
         printf("%d ", matrix[i][j]);
      }
      printf("\n");
   }
}

void addMatrices(int matri1[ROWS][COLS], int matri2[ROWS][COLS], int result[ROWS][COLS]) {
   for (int i = 0; i < ROWS; i++) {
      for (int j = 0; j < COLS; j++) {
         result[i][j] = matri1[i][j] + matri2[i][j];
      }
   }
}

int main() {
   int matri1[ROWS][COLS];
   int matri2[ROWS][COLS];
   int sumMatrix[ROWS][COLS];

   printf("Enter elements for the first 3x3 matrix:\n");
   inputMatrix(matri1);

   printf("Enter elements for the second 3x3 matrix:\n");
   inputMatrix(matri2);


   addMatrices(matri1, matri2, sumMatrix);

   printf("\nFirst Matrix:\n");
```

```
    displayMatrix(matri1);

    printf("\nSecond Matrix:\n");
    displayMatrix(matri2);

    printf("\nSum of Matrices:\n");
    displayMatrix(sumMatrix);
    return 0;
}
```