

```
/* HW ARRAY
 * EX2: insert n numbers and find the average
 */

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

int main() {
    int num;

    /* using dynamic memory allocation
     is this acceptable in embedded c ?? (i don't think)
     to avoid this problem we may use arr1[50] and make the loop based on the number in range */
    float *arr1 = (float *)malloc(num * sizeof(float));
    float sum=0, average;
```



<terminated> (exit value: 0) Assignment Debug [C/C++ Application] F:\embedded_proj\Assignment\Debug\Assignment.exe (2/5/24, 7:56 PM)

```
enter the number of data: 3
enter number 1 : 3
enter number 2 : 2.4
enter number 3 : 1
The average: 2.13
```

embedded_proj - C/C++ - Assignment/main.c - Eclipse Platform

File Edit Source Refactor Navigate Search Project AVR Run Window Help

Pr... C/... Assignment Binaries Includes Debug main.c stdio.h main():int

```
/* HW ARRAY
 * EX3: matrix transpose
 */

#include <stdio.h>

int main() {

    int r,c;
    float arr1[50][50];
    float arr2[50][50];
```

Quick Access

stdio.h
main():int

Problems Console Include Browser Debugger Console Debug

<terminated> (exit value: 0) Assignment Debug [C/C++ Application] F:\embedded_proj\Assignment\Debug\Assignment.exe (2/5/24, 8:35 PM)

enter rows and columns numbers:
2
3
enter a00: 1
enter a01: 2
enter a02: 3
enter a10: 5
enter a11: 7
enter a12: 8
The entered matrix :
1.00 2.00 3.00
5.00 7.00 8.00
The transpose is:
1.00 5.00
2.00 7.00
3.00 8.00

Writable Smart Insert 2:25

embedded_proj - C/C++ - Assignment/main.c - Eclipse Platform

File Edit Source Refactor Navigate Search Project AVR Run Window Help

Pr... C/... Assignment

- Binaries
- Includes
- Debug
- main.c
 - stdio.h
 - main(): int

```
/* HW ARRAY
 * EX4: add item to array with specific location*/

#include <stdio.h>

int main() {

    int num,loc,item, arr1[50];

    printf("Enter number of elements: ");
    fflush(stdout); fflush(stdin);
    scanf("%d\n",&num);

    for(int i=0; i< num ;i++)
    {
        scanf("%d",&arr1[i]);
    }

    printf("\nEnter the element to be inserted: ");
    fflush(stdout); fflush(stdin);
    scanf("%d",&item);
    printf("Enter the location to be inserted: ");
    fflush(stdout); fflush(stdin);
    scanf("%d",&loc);
}
```

stdio.h

- main(): int

Problems Console Include Browser Debugger Console Debug

<terminated> (exit value: 0) Assignment Debug [C/C++ Application] F:\embedded_proj\Assignment\Debug\Assignment.exe (2/5/24, 10:21 PM)

Enter number of elements: 5
1 2 3 4 5

Enter the element to be inserted: 6

Enter the location to be inserted: 2
1 6 2 3 4 5

Writable Smart Insert 22: 1

embedded_proj - C/C++ - Assignment/main.c - Eclipse Platform

File Edit Source Refactor Navigate Search Project AVR Run Window Help

Pr... C/... Assignment Binaries Includes Debug main.c stdio.h main():int

main.c

```
/* HW ARRAY
 * EX5: add item to search element in array */

#include <stdio.h>

int main() {

    int num,search,loc, arr1[50];

    printf("Enter number of elements: ");
    fflush(stdout); fflush(stdin);
    scanf("%d\n",&num);

    for(int i=0; i< num ;i++)
    {
        scanf("%d",&arr1[i]);
    }
}
```

stdio.h
main(): int

Problems Console Include Browser Debugger Console Debug

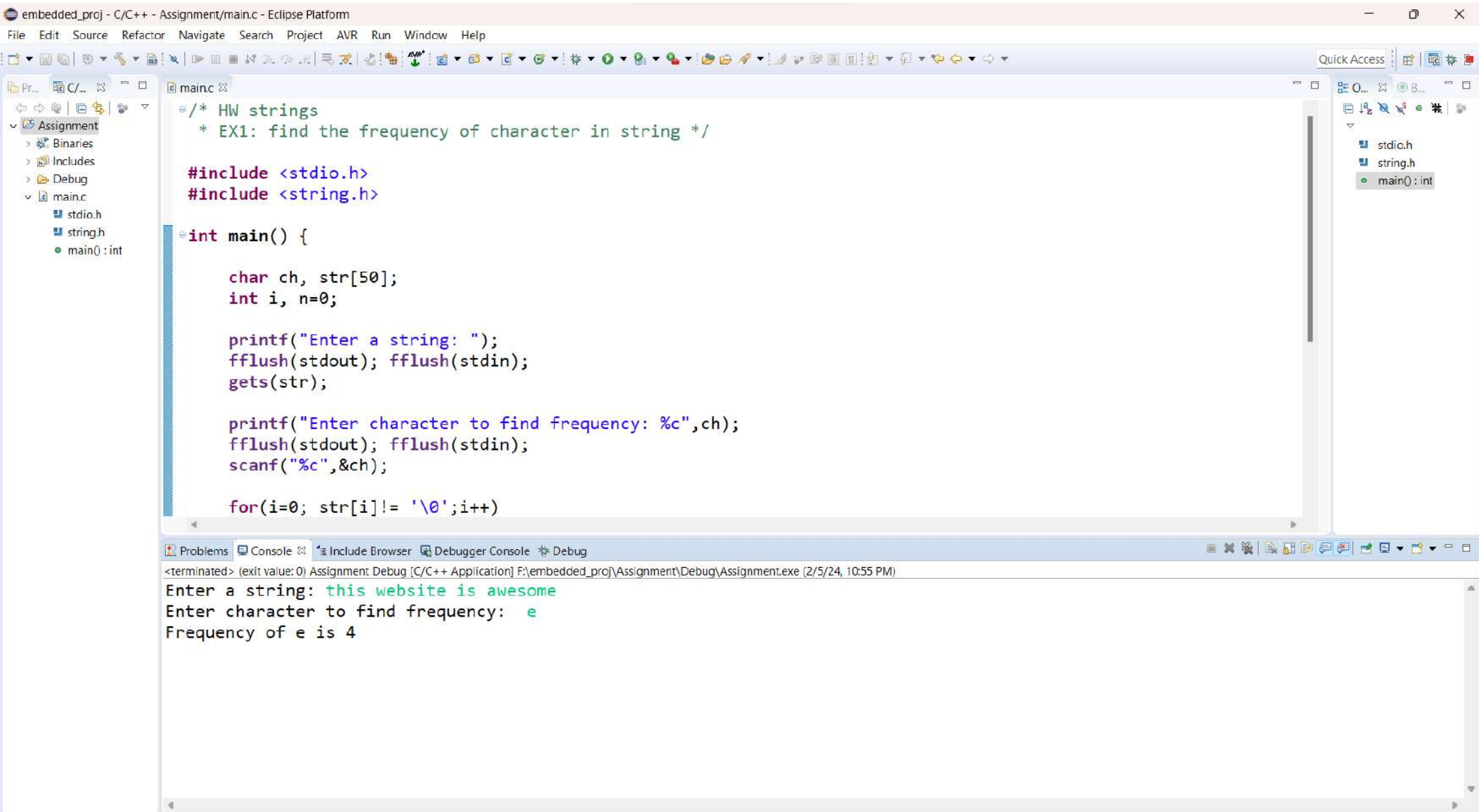
<terminated> (exit value: 0) Assignment Debug [C/C++ Application] F:\embedded_proj\Assignment\Debug\Assignment.exe (2/5/24, 10:32 PM)

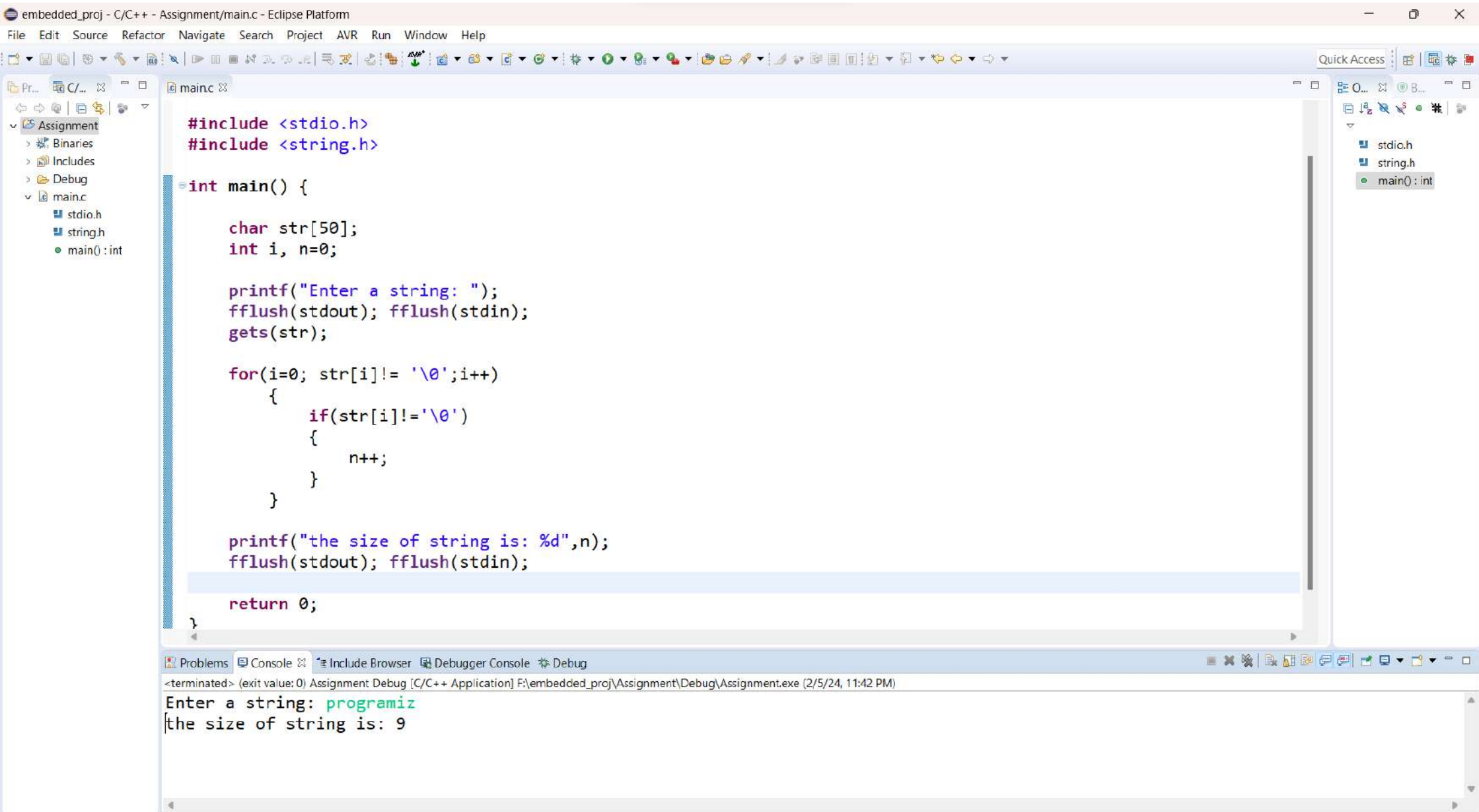
Enter number of elements: 5
11 22 33 44 55

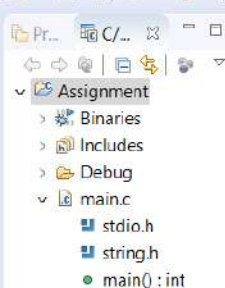
Enter the element to be searched: 44

Element Found in location: 4

Writable Smart Insert 28 : 10







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

int main() {

    char str[50], reversed[50];
    int i, n=0;

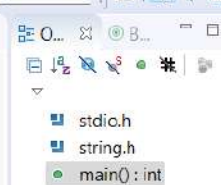
    printf("Enter a string: ");
    fflush(stdout); fflush(stdin);
    gets(str);
    n= strlen(str);

    for (i=0; i<n; i++)
    {
        reversed[i] = str[n-i-1];
    }

    reversed[n] = '\0';

    printf("the reversed is: %s", reversed);
    fflush(stdout); fflush(stdin);

    return 0;
}
```



<terminated> (exit value: 0) Assignment Debug [C/C++ Application] F:\embedded_proj\Assignment\Debug\Assignment.exe (2/6/24, 12:03 AM)

Enter a string: hello
the reversed is: olleh