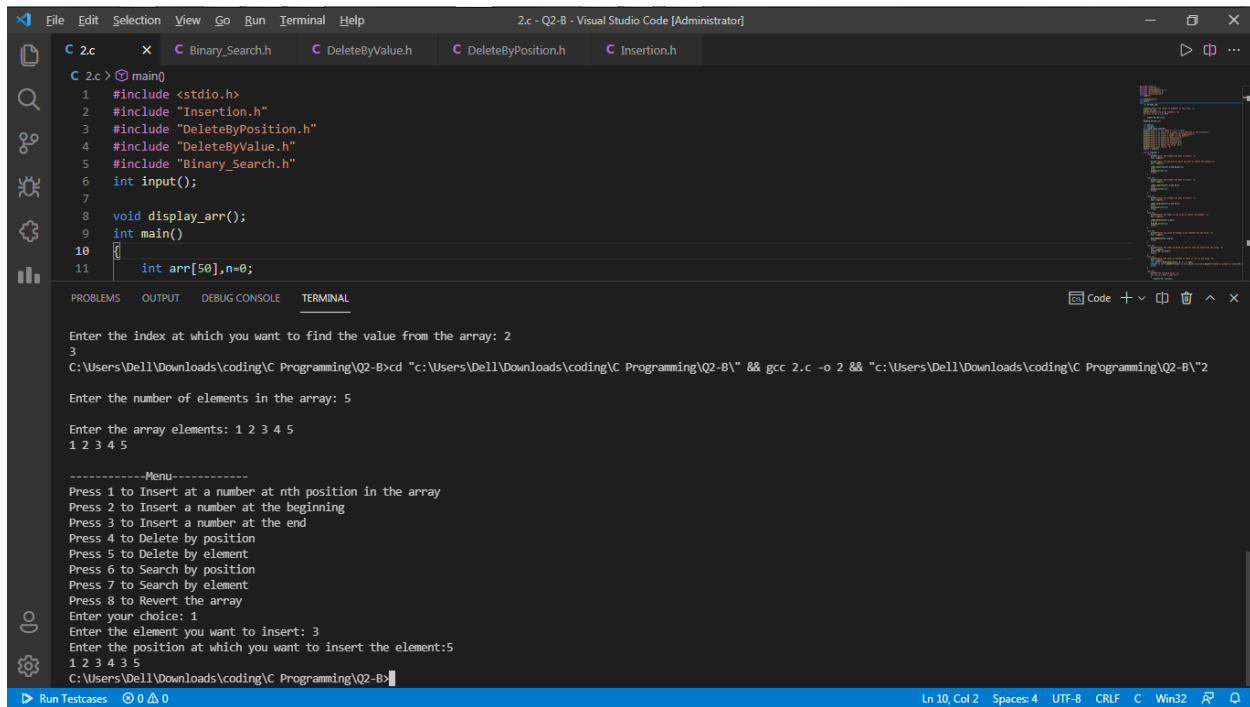


# Outputs for Q2)b)

Q2) B)

a) Insertion at a position in the array



The screenshot shows the Visual Studio Code interface with a C program open in the editor. The program includes headers for stdio.h, Insertion.h, DeleteByPosition.h, DeleteByValue.h, and Binary\_Search.h. It defines an input function, a display\_array function, and a main function. The main function initializes an array of size 50 and calls input(). The terminal output shows the program's execution: it prompts for an index to find a value (2), then for the number of elements (5), and then for the array elements (1 2 3 4 5). A menu is displayed with options 1 to 8. Option 1 (Insert at nth position) is chosen. The program prompts for the element to insert (3) and the position (5). The array is then displayed as 1 2 3 4 3 5.

```
C 2.c > main()
1  #include <stdio.h>
2  #include "Insertion.h"
3  #include "DeleteByPosition.h"
4  #include "DeleteByValue.h"
5  #include "Binary_Search.h"
6  int input();
7
8  void display_arr();
9  int main()
10
11  int arr[50],n=0;

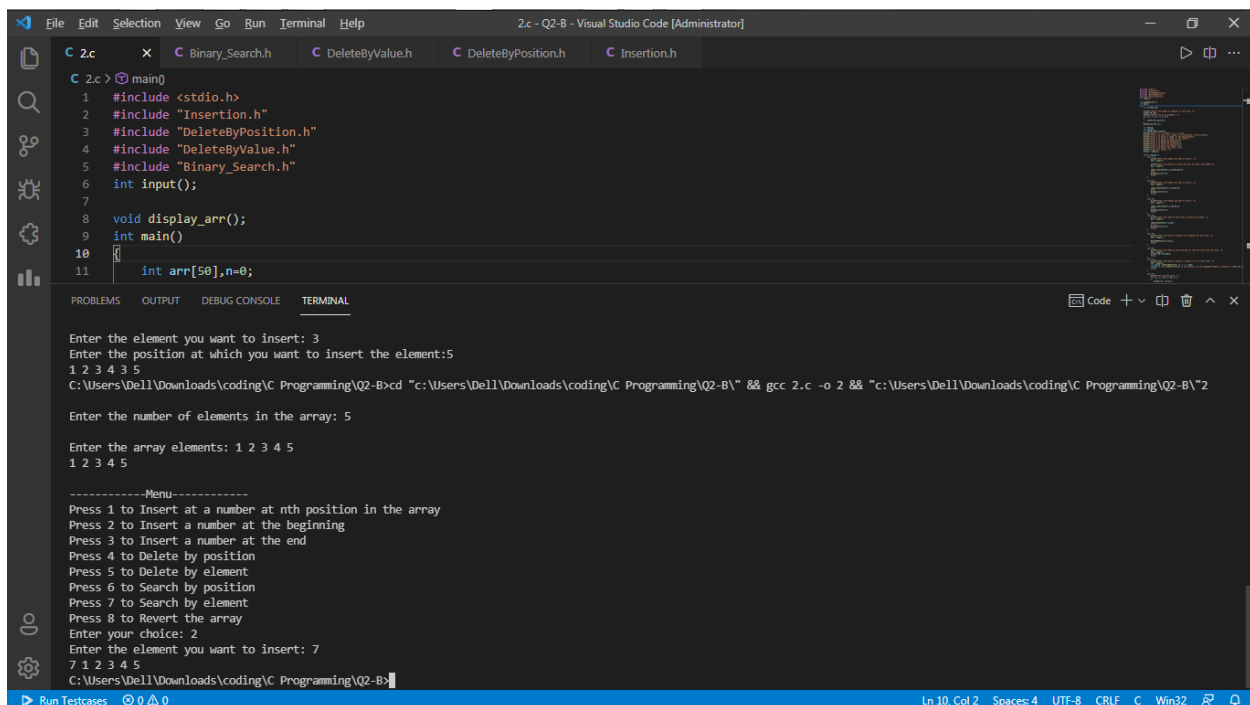
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Enter the index at which you want to find the value from the array: 2
3
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>cd "c:\Users\Dell\Downloads\coding\C Programming\Q2-B" && gcc 2.c -o 2 && "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\2"

Enter the number of elements in the array: 5

Enter the array elements: 1 2 3 4 5
1 2 3 4 5

-----Menu-----
Press 1 to Insert at a number at nth position in the array
Press 2 to Insert a number at the beginning
Press 3 to Insert a number at the end
Press 4 to Delete by position
Press 5 to Delete by element
Press 6 to Search by position
Press 7 to Search by element
Press 8 to Revert the array
Enter your choice: 1
Enter the element you want to insert: 3
Enter the position at which you want to insert the element:5
1 2 3 4 3 5
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>
```

b) Insertion at beginning



The screenshot shows the Visual Studio Code interface with the same C program as in the previous screenshot. The terminal output shows the program's execution: it prompts for the element to insert (3) and the position (5). The array is then displayed as 1 2 3 4 3 5. A menu is displayed with options 1 to 8. Option 2 (Insert at beginning) is chosen. The program prompts for the element to insert (7) and the position (5). The array is then displayed as 7 1 2 3 4 5.

```
C 2.c > main()
1  #include <stdio.h>
2  #include "Insertion.h"
3  #include "DeleteByPosition.h"
4  #include "DeleteByValue.h"
5  #include "Binary_Search.h"
6  int input();
7
8  void display_arr();
9  int main()
10
11  int arr[50],n=0;

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Enter the element you want to Insert: 3
Enter the position at which you want to insert the element:5
1 2 3 4 3 5
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>cd "c:\Users\Dell\Downloads\coding\C Programming\Q2-B" && gcc 2.c -o 2 && "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\2"

Enter the number of elements in the array: 5

Enter the array elements: 1 2 3 4 5
1 2 3 4 5

-----Menu-----
Press 1 to Insert at a number at nth position in the array
Press 2 to Insert a number at the beginning
Press 3 to Insert a number at the end
Press 4 to Delete by position
Press 5 to Delete by element
Press 6 to Search by position
Press 7 to Search by element
Press 8 to Revert the array
Enter your choice: 2
Enter the element you want to insert: 7
7 1 2 3 4 5
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>
```

### c) Insertion at the end

```
2.c - Q2-B - Visual Studio Code [Administrator]
C 2.c x C Binary_Search.h C DeleteByValue.h C DeleteByPosition.h C Insertion.h
C 2.c > main()
1 #include <stdio.h>
2 #include "Insertion.h"
3 #include "DeleteByPosition.h"
4 #include "DeleteByValue.h"
5 #include "Binary_Search.h"
6 int input();
7
8 void display_arr();
9 int main()
10
11     int arr[50],n=0;

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Enter your choice: 2
Enter the element you want to insert: 7
7 1 2 3 4 5
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>cd "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\" && gcc 2.c -o 2 && "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\"2
Enter the number of elements in the array: 5
Enter the array elements: 1 2 3 4 5
1 2 3 4 5

-----Menu-----
Press 1 to Insert at a number at nth position in the array
Press 2 to Insert a number at the beginning
Press 3 to Insert a number at the end
Press 4 to Delete by position
Press 5 to Delete by element
Press 6 to Search by position
Press 7 to Search by element
Press 8 to Revert the array
Enter your choice: 3
Enter the element you want to insert: 7
1 2 3 4 5 7
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>
```

### d) Delete by position

```
2.c - Q2-B - Visual Studio Code [Administrator]
C 2.c x C Binary_Search.h C DeleteByValue.h C DeleteByPosition.h C Insertion.h
C 2.c > main()
1 #include <stdio.h>
2 #include "Insertion.h"
3 #include "DeleteByPosition.h"
4 #include "DeleteByValue.h"
5 #include "Binary_Search.h"
6 int input();
7
8 void display_arr();
9 int main()
10
11     int arr[50],n=0;
12
13     printf("\nEnter the number of elements in the array: ");
14     scanf("%d",&n);

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>cd "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\" && gcc 2.c -o 2 && "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\"2
Enter the number of elements in the array: 5
Enter the array elements: 1 2 3 4 5
1 2 3 4 5

-----Menu-----
Press 1 to Insert at a number at nth position in the array
Press 2 to Insert a number at the beginning
Press 3 to Insert a number at the end
Press 4 to Delete by position
Press 5 to Delete by element
Press 6 to Search by position
Press 7 to Search by element
Press 8 to Revert the array
Enter your choice: 4
Enter the index of the array to remove the element: 3
1 2 3 5
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>
```

### e) Delete by element (first occurrence of element)

```
File Edit Selection View Go Run Terminal Help
2.c - Q2-B - Visual Studio Code [Administrator]

C 2.c x C Binary_Search.h C DeleteByValue.h C DeleteByPosition.h C Insertion.h

C 2.c > main()
22     int choice;
23     int num,pos;
24     int sum=0,rem=0,count=0;
25     printf("\n\n-----Menu-----\n");
26     printf("Press 1 to Insert at a number at nth position in the array\n");
27     printf("Press 2 to Insert a number at the beginning\n");
28     printf("Press 3 to Insert a number at the end\n");
29     printf("Press 4 to Delete by position\n");
30     printf("Press 5 to Delete by element\n");
31     printf("Press 6 to Search by position\n");
32     printf("Press 7 to Search by element \n");
33     printf("Press 8 to Revert the array \n");
34     printf("Enter your choice: ");
35     choice = input();

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>cd "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\" && gcc 2.c -o 2 && "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\2"

Enter the number of elements in the array: 5

Enter the array elements: 1 2 3 4 5
1 2 3 4 5

-----Menu-----
Press 1 to Insert at a number at nth position in the array
Press 2 to Insert a number at the beginning
Press 3 to Insert a number at the end
Press 4 to Delete by position
Press 5 to Delete by element
Press 6 to Search by position
Press 7 to Search by element
Press 8 to Revert the array
Enter your choice: 5
Enter the value of element to be removed from the array: 2
New Array : 1 3 4 5
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>

Run Testcases 0 0 0 Ln 10, Col 2 Spaces: 4 UTF-8 CRLF C Win32
```

## f) Search by position

```
File Edit Selection View Go Run Terminal Help
2.c - Q2-B - Visual Studio Code [Administrator]

C 2.c x C Binary_Search.h C DeleteByValue.h C DeleteByPosition.h C Insertion.h

C 2.c > main()
1     #include <stdio.h>
2     #include "Insertion.h"
3     #include "DeleteByPosition.h"
4     #include "DeleteByValue.h"
5     #include "Binary_Search.h"
6     int input();
7
8     void display_arr();
9     int main()
10
11     int arr[50],n=0;

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>cd "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\" && gcc 2.c -o 2 && "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\2"

Enter the number of elements in the array: 5

Enter the array elements: 1 2 3 4 5
1 2 3 4 5

-----Menu-----
Press 1 to Insert at a number at nth position in the array
Press 2 to Insert a number at the beginning
Press 3 to Insert a number at the end
Press 4 to Delete by position
Press 5 to Delete by element
Press 6 to Search by position
Press 7 to Search by element
Press 8 to Revert the array
Enter your choice: 6
Enter the index at which you want to find the value from the array: 2
3
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>

Run Testcases 0 0 0 Ln 10, Col 2 Spaces: 4 UTF-8 CRLF C Win32
```

## g) Search by element (present or not)

```
File Edit Selection View Go Run Terminal Help
2.c - Q2-B - Visual Studio Code [Administrator]

C 2.c x C Binary_Search.h C DeleteByValue.h C DeleteByPosition.h C Insertion.h
C 2.c > main()
22 int choice;
23 int num,pos;
24 int sum=0,rem=0,count=0;
25 printf("\n\n-----Menu-----\n");
26 printf("Press 1 to Insert at a number at nth position in the array\n");
27 printf("Press 2 to Insert a number at the beginning\n");
28 printf("Press 3 to Insert a number at the end\n");
29 printf("Press 4 to Delete by position\n");
30 printf("Press 5 to Delete by element\n");
31 printf("Press 6 to Search by position\n");
32 printf("Press 7 to Search by element \n");
33 printf("Press 8 to Revert the array \n");
34 printf("Enter your choice: ");
35 choice = input();

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>cd "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\2" && gcc 2.c -o 2 && "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\2"

Enter the number of elements in the array: 5

Enter the array elements: 1 2 3 4 5
1 2 3 4 5

-----Menu-----
Press 1 to Insert at a number at nth position in the array
Press 2 to Insert a number at the beginning
Press 3 to Insert a number at the end
Press 4 to Delete by position
Press 5 to Delete by element
Press 6 to Search by position
Press 7 to Search by element
Press 8 to Revert the array
Enter your choice: 3
Enter the value of element to check if it's in the array: 3
Element is present at index 2
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>
```

h) Revert the array (in place)

```
File Edit Selection View Go Run Terminal Help
2.c - Q2-B - Visual Studio Code [Administrator]

C 2.c x C Binary_Search.h C DeleteByValue.h C DeleteByPosition.h C Insertion.h
C 2.c > main()
22 int choice;
23 int num,pos;
24 int sum=0,rem=0,count=0;
25 printf("\n\n-----Menu-----\n");
26 printf("Press 1 to Insert at a number at nth position in the array\n");
27 printf("Press 2 to Insert a number at the beginning\n");
28 printf("Press 3 to Insert a number at the end\n");
29 printf("Press 4 to Delete by position\n");
30 printf("Press 5 to Delete by element\n");
31 printf("Press 6 to Search by position\n");
32 printf("Press 7 to Search by element \n");
33 printf("Press 8 to Revert the array \n");
34 printf("Enter your choice: ");
35 choice = input();
36

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>cd "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\2" && gcc 2.c -o 2 && "c:\Users\Dell\Downloads\coding\C Programming\Q2-B\2"

Enter the number of elements in the array: 5

Enter the array elements: 1 2 3 4 5
1 2 3 4 5

-----Menu-----
Press 1 to Insert at a number at nth position in the array
Press 2 to Insert a number at the beginning
Press 3 to Insert a number at the end
Press 4 to Delete by position
Press 5 to Delete by element
Press 6 to Search by position
Press 7 to Search by element
Press 8 to Revert the array
Enter your choice: 8
The reverted array: 5 4 3 2 1
C:\Users\Dell\Downloads\coding\C Programming\Q2-B>
```