//ARRAY INSERTION

:AT FRONT

Input:#include <stdio.h>

int main() {

int arr[100], size, value;

printf("Enter the size of the array: ");

scanf("%d", &size);

printf("Enter the elements of the array:\n");

for (int i = 0; i < size; i++) {

scanf("%d", &arr[i]);

}

printf("\nArray before insertion:\n");

for (int i = 0; i < size; i++) {

printf("%d ", arr[i]);

}

printf("\n");

printf("Enter value to insert at the front: ");

scanf("%d", &value);

for (int i = size; i > 0; i--) {

arr[i] = arr[i - 1];

}

arr[0] = value;

size++;

printf("\nArray after insertion at the front:\n");

for (int i = 0; i < size; i++) {

printf("%d ", arr[i]);

}

printf("\n");

return 0;

}

Output:Enter the size of the array: 4

Enter the elements of the array:

4

5

6

7

Array before insertion:

4 5 6 7

Enter value to insert at the front: 8

Array after insertion at the front:

8 4 5 6 7

=== Code Execution Successful ===

//in middle

Input: int arr[100], size, value, position;

printf("Enter the size of the array: ");

scanf("%d", &size);

printf("Enter the elements of the array:\n");

for (int i = 0; i < size; i++) {

scanf("%d", &arr[i]);

}

printf("\nArray before insertion:\n");

for (int i = 0; i < size; i++) {

printf("%d ", arr[i]);

}

printf("\n");

position = size / 2;

printf("Enter value to insert at the middle: ");

scanf("%d", &value);

for (int i = size; i > position; i--) {

arr[i] = arr[i - 1];

}

arr[position] = value;

size++;

printf("\nArray after insertion at the middle:\n");

for (int i = 0; i < size; i++) {

printf("%d ", arr[i]);

}

printf("\n");

output: Enter the size of the array: 3

Enter the elements of the array:

4

5

6

Array before insertion:

4 5 6

Enter value to insert at the middle: 3

Array after insertion at the middle:

4 3 5 6

=== Code Execution Successful ===

//at last

Input: #include <stdio.h>

int main() {

int arr[100], size, value;

printf("Enter the size of the array: ");

scanf("%d", &size);

printf("Enter the elements of the array:\n");

for (int i = 0; i < size; i++) {

scanf("%d", &arr[i]);

}

printf("\nArray before insertion:\n");

for (int i = 0; i < size; i++) {

printf("%d ", arr[i]);

}

printf("\n");

printf("Enter value to insert at the end: ");

scanf("%d", &value);

arr[size] = value;

size++;

printf("\nArray after insertion at the end:\n");

for (int i = 0; i < size; i++) {

printf("%d ", arr[i]);

}

printf("\n");

return 0;

}

Output: Enter the size of the array: 3

Enter the elements of the array:

4

5

6

Array before insertion:

4 5 6

Enter value to insert at the end: 3

Array after insertion at the end:

4 5 6 3

=== Code Execution Successful ===

//delete element in an array

At first

Input: #include <stdio.h>

int main() {

int n, i;

printf("Enter the number of elements: ");

scanf("%d", &n);

int arr[n];

printf("Enter the elements:\n");

for (i = 0; i < n; i++) {

scanf("%d", &arr[i]);

}

for (i = 1; i < n; i++) {

arr[i - 1] = arr[i];

}

n--;

printf("Array after deleting the first element:\n");

for (i = 0; i < n; i++) {

printf("%d ", arr[i]);

}

return 0;

}

Output: Enter the number of elements: 5

Enter the elements:

3

4

5

6

6

Array after deleting the first element:

4 5 6 6

=== Code Execution Successful ===

//at last

Input: #include <stdio.h>

int main() {

int n, i, middle;

// Input the number of elements in the array

printf("Enter the number of elements: ");

scanf("%d", &n);

int arr[n];

// Input the elements of the array

printf("Enter the elements:\n");

for (i = 0; i < n; i++) {

scanf("%d", &arr[i]);

}

// Find the middle element index

middle = n / 2;

// Deleting the middle element

for (i = middle; i < n - 1; i++) {

arr[i] = arr[i + 1];

}

n--; // Decrease size of the array after deletion

// Display the modified array

printf("Array after deleting the middle element:\n");

for (i = 0; i < n; i++) {

printf("%d ", arr[i]);

}

return 0;

}

Output: Enter the number of elements: 5

Enter the elements:

1

2

3

6

5

Array after deleting the middle element:

1 2 6 5

=== Code Execution Successful ===

//at last

Input: #include <stdio.h>

int main() {

int n, i;

// Input the number of elements in the array

printf("Enter the number of elements: ");

scanf("%d", &n);

int arr[n];

// Input the elements of the array

printf("Enter the elements:\n");

for (i = 0; i < n; i++) {

scanf("%d", &arr[i]);

}

// Deleting the last element by reducing size (no shifting needed)

n--;

// Display the modified array

printf("Array after deleting the last element:\n");

for (i = 0; i < n; i++) {

printf("%d ", arr[i]);

}

return 0;

}

Output: Enter the number of elements: 3

Enter the elements:

5

6

9

Array after deleting the last element:

5 6

=== Code Execution Successful ===