1. **Display**

// Program to implement array

#include <stdio.h>

#define MAX 5

//Name: Trideep Lal Das

//Matrix Number: MC170103673

void display (int \*);

void main()

{

int arr[MAX] = {1, 2, 3, 4, 5};

/\* printf ("%d\n", arr[0]);

printf ("%d\n", arr[4]); \*/

printf ("\nElements of Array: \n");

display(arr);

}

//display the contents of a array

void display (int \*arr)

{

//transverse the entire array

int i;

for (i = 0; i < MAX; i++)

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

}

//line 18 to 25 defines the funct

1. **Insert**

#include <stdio.h>

#define MAX 5

//Name: Trideep Lal Das

//Matrix Number: MC170103673

// Note: we're creating static arrays

void display(int \*);

void insert(int \*, int pos, int num);

void main()

{

int arr[5] = {1, 2, 3, 2, 1};

printf ("\nElements of Array: ");

display(arr);

insert(arr, 1, 11);

printf ("\nElements of Array: ");

display(arr);

insert(arr, 3, 33);

printf ("\nElements of Array: ");

display(arr);

}

//displays contents of array

void display(int \*arr)

{

//transverse the entire array

int i;

for (i = 0; i < MAX; i++)

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

}

//inserts an element "num" at given position "pos"

void insert(int \*arr, int pos, int num)

{

//shifts elements to right

int i;

for (i = MAX - 1; i >= pos; i--)

{

//printf ("%d\t%d\n", arr[i], arr[i-1]);

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

}

arr[i] = num;

}

1. **Delete**

#include <stdio.h>

#define MAX 5

//Name: Trideep Lal Das

//Matrix Number: MC170103673

// Note: we're creating static arrays

void display(int \*);

void insert(int \*, int pos, int num);

void del(int \*, int pos);

void main()

{

int arr[5] = {1, 2, 3, 4, 5};

printf ("\nElements of Array: ");

display(arr);

insert(arr, 1, 11);

printf ("\nElements of Array: ");

display(arr);

insert(arr, 3, 33);

printf ("\nElements of Array: ");

display(arr);

del(arr, 2);

printf ("\nArray after Deletion: ");

display(arr);

del(arr, 2);

printf ("\nArray after Deletion: ");

display(arr);

}

//displays contents of array

void display(int \*arr)

{

//transverse the entire array

int i;

for (i = 0; i < MAX; i++)

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

}

//inserts an element "num" at given position "pos"

void insert(int \*arr, int pos, int num)

{

//shifts elements to right

int i;

for (i = MAX - 1; i >= pos; i--)

{

//printf ("%d\t%d\n", arr[i], arr[i-1]);

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

}

printf("\n\n%d\t\n\n", i);

arr[i] = num;

}

//deletes an element from the given position "pos"

void del(int \*arr, int pos)

{

//skip to the desired position

int i;

for (i = pos; i < MAX; i++)

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

arr[i - 1] = 0;

}

1. **Reverse**

#include <stdio.h>

#define MAX 5

//Name: Trideep Lal Das

//Matrix Number: MC170103673

// Note: we're creating static arrays

void display(int \*);

void insert(int \*, int pos, int num);

void reverse(int \*);

void main()

{

int arr[5] = {1, 2, 3, 2, 1};

printf ("\nElements of Array: ");

display(arr);

insert(arr, 1, 11);

printf ("\nElements of Array: ");

display(arr);

insert(arr, 3, 33);

printf ("\nElements of Array: ");

display(arr);

reverse(arr);

printf("\nAfter reversing: ");

display(arr);

}

//displays contents of array

void display(int \*arr)

{

//transverse the entire array

int i;

for (i = 0; i < MAX; i++)

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

}

//inserts an element "num" at given position "pos"

void insert(int \*arr, int pos, int num)

{

//shifts elements to right

int i;

for (i = MAX - 1; i >= pos; i--)

{

//printf ("%d\t%d\n", arr[i], arr[i-1]);

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

}

arr[i] = num;

}

void reverse(int \*arr)

{

int i, temp;

for (i = 0; i < MAX / 2; i++)

{

temp = arr[i];

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

arr[MAX - 1 - i] = temp;

}

}

1. **Search**

#include <stdio.h>

#define MAX 5

//Name: Trideep Lal Das

//Matrix Number: MC170103673

// Note: we're creating static arrays

void display(int \*);

void insert(int \*, int pos, int num);

void search (int \*, int num);

void main()

{

int arr[5] = {1, 2, 3, 2, 1};

printf ("\nElements of Array: ");

display(arr);

insert(arr, 1, 11);

printf ("\nElements of Array: ");

display(arr);

insert(arr, 3, 33);

printf ("\nElements of Array: ");

display(arr);

search(arr, 222);

search(arr, 33);

}

//displays contents of array

void display(int \*arr)

{

//transverse the entire array

int i;

for (i = 0; i < MAX; i++)

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

}

//inserts an element "num" at given position "pos"

void insert(int \*arr, int pos, int num)

{

//shifts elements to right

int i;

for (i = MAX - 1; i >= pos; i--)

{

//printf ("%d\t%d\n", arr[i], arr[i-1]);

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

}

arr[i] = num;

}

//Search array for given element num

void search(int \*arr, int num)

{

//Transverse the array

int i;

for (i = 0; i < MAX; i++)

{

if (arr[i] == num)

{

printf ("\n\n The Element %d is present at %dth position.", num, i+1);

return;

}

}

if (i == MAX)

printf ("\n\n The Eelement %d is not present in the array.", num);

}