Qno.1)

#include <stdio.h>

int main()

{

int arr[100], n, i, j, k;

printf("Enter size of array: ");

scanf("%d", &n);

printf("Enter each element for the given array: ");

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

{

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

}

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

{

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

{

if(arr[i] == arr[j])

{

for(k = j; k < n; k++)

{

arr[k] = arr[k + 1];

}

n--;

j--;

}

}

}

printf("Results: ");

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

{

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

}

return 0;

}

Qno.2)

#include <stdio.h>

#include <stdlib.h>

void swap(int \*a, int \*b)

{

int temp = \*a;

\*a = \*b;

\*b = temp;

}

void permute(int \*arr, int start, int end)

{

if (start == end)

{

for (int i = 0; i <= end; i++)

{

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

}

printf(" ");

}

else

{

for (int i = start; i <= end; i++)

{

swap(&arr[start], &arr[i]);

permute(arr, start + 1, end);

swap(&arr[start], &arr[i]);

}

}

}

int main()

{

int n;

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

scanf("%d", &n);

int \*arr = malloc(n \* sizeof(int));

printf("Enter %d distinct elements: ", n);

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

{

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

}

printf("All permutations: ");

permute(arr, 0, n - 1);

free(arr);

return 0;

}

//Note that my program first asks no. of elements then, we should input three then we can process ahead.

Qno.3)

#include <stdio.h>

int main()

{

int n, num = 1;

printf("Enter the number of lines you want to print: ");

scanf("%d", &n);

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

{

for (int j = 1; j <= i; j++)

{

printf("%d ", num);

num++;

}

printf("\n");

}

return 0;

}

Qno.4)

#include <stdio.h>

#include <string.h>

int main()

{

char str1[100], str2[100];

printf("Enter the first string: ");

scanf("%s", str1);

printf("And second string: ");

scanf("%s", str2);

int len1 = strlen(str1);

int len2 = strlen(str2);

if (len1 != len2)

{

printf("Results: No");

return 0;

}

int count[26] = {0};

for (int i = 0; i < len1; i++)

{

count[str1[i] - 'a']++;

count[str2[i] - 'a']--;

}

for (int i = 0; i < 26; i++)

{

if (count[i] != 0)

{

printf("Results: No");

return 0;

}

}

printf("Results: Yes");

return 0;

}

Qno.5)

#include <stdio.h>

int main()

{

int arr[100], freq[100];

int n, count;

printf("Enter size of array: ");

scanf("%d", &n);

printf("Enter each element for the given array: ");

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

{

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

freq[i] = -1;

}

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

{

count = 1;

for (int j = i + 1; j < n; j++)

{

if (arr[i] == arr[j])

{

count++;

freq[j] = 0;

}

}

if (freq[i] != 0)

{

freq[i] = count;

}

}

printf("Frequency for each element: ");

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

{

if (freq[i] != 0)

{

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

}

}

return 0;

}

Qno.6)

a)

#include <stdio.h>

int main() {

int i = -23;

int \*p = (int\*)61;

printf("\*p = %d\n", \*p);

return 0;

}

b)

#include <stdio.h>

int main() {

int i = 1;

int \*p = (int\*)61;

printf("\*p = %d\n", \*p);

return 0;

}

c)

#include <stdio.h>

int main() {

int i = 48;

int \*p;

printf("\*p = %d\n", \*p);

return 0;

}

d)

#include <stdio.h>

int main() {

int i = 10;

int \*p = &i;

int j = \*p;

++\*p;

printf("j = %d\n", j);

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

return 0;

}