VIDHYADEEP UNIVERSITY
Holy Flame Of Knowledge

VIDHYADEEP UNIVERSITY INSTITUTE OF B.Sc. IT & BCA	
NAME :-	
SUBJECT :-	**ENROLLMENT :-**
SUBMIT DATE :-	**DEPARTMENT :-**

SR NO	PROBLEMS	DATE	SIGN
1	DISPLAY INTEGER ENTER BY USER USING AN ARRAY.		
2	DISPLAY CHARACTER ENTER BY USER USING ARRAY.		
3	INITIALISATION OF AN ARRAY.		
4	CREATE A a[i] = i[a]		
5	SUM OF VALUES IN ARRAY .		
6	SUM OF ENTERED INTEGER VALUS.		
7	DISPLAY CHARACTER TYPE ARRAY.		
8	DISPLAY MATRIX ADDITION.		
9	DISPLAY MULTIPLICATION OF ARRAY ELEMENTS.		

1 - DISPLAY INTEGER ENTER BY USER USING AN ARRAY.

ANS =>

```
#include <stdio.h>

int main() {
   int n;
   printf("Enter the number of integers you want to enter: ");
   scanf("%d", &n);
   int arr[n];
   printf("Enter %d integers:\n", n);
   for (int i = 0; i < n; i++) {
      printf("Integer %d: ", i + 1);
      scanf("%d", &arr[i]);
   }
   printf("You entered:\n");
   for (int i = 0; i < n; i++) {
      printf("Integer %d: %d\n", i + 1, arr[i]);
   }
   return 0;
}
```

2 - DISPLAY CHARACTER ENTER BY USER USING ARRAY.

ANS =>

```
#include <stdio.h>

int main() {
   int n;
   printf("Enter the number of characters you want to enter: ");
   scanf("%d", &n);
   char arr[n + 1];
   while (getchar() != '\n');
   printf("Enter %d characters:\n", n);
   for (int i = 0; i < n; i++) {
      printf("Character %d: ", i + 1);
      arr[i] = getchar();
      while (getchar() != '\n');
   arr[n] = '\0';
   printf("You entered:\n");
   for (int i = 0; i < n; i++) {
      printf("Character %d: %c\n", i + 1, arr[i]);
   }
   return 0;
}
```

3 - INITIALISATION OF AN ARRAY.

ANS =>

```
#include <stdio.h>

int main()
   int arr1[5] = {1, 2, 3, 4, 5};
   char arr2[4] = {'a', 'b', 'c', '\0'};
   printf("Integer array elements:\n");
   for (int i = 0; i < 5; i++) {
      printf("%d ", arr1[i]);
   }
   printf("\n");
   printf("Character array elements:\n");
   for (int i = 0; i < 4; i++) {
      printf("%c ", arr2[i]);
   }
   printf("\n");
   return 0;
}
```

4 - CREATE A a[i] = i[a]

ANS =>

```
#include <stdio.h>

int main() {
   int size = 5;
   int arr[size];
   for (int i = 0; i < size; i++) {
      arr[i] = i[arr];    }
   printf("Array elements:\n");
   for (int i = 0; i < size; i++) {
      printf("arr[%d] = %d\n", i, arr[i]);
   }
   return 0;
}
```

5 - SUM OF VALUES IN ARRAY .

ANS =>

```
#include <stdio.h>
int main() {
   int n;
   printf("Enter the number of elements: ");
   scanf("%d", &n);
   int arr[n];
   for(int i = 0; i < n; i++) {
         printf("Enter %d elements:\n", i+1);
         scanf("%d", &arr[i]);
   }
   int sum = 0;
   for(int i = 0; i < n; i++) {
      sum += arr[i];
   }
   printf("The sum of the elements is: %d\n", sum);
   return 0;
}
```

6 - SUM OF ENTERED INTEGER VALUS.

ANS =>

```
#include <stdio.h>
int main() {
   int size;
   int sum = 0;
   printf("Enter the number of integers: ");
   scanf("%d", &size);
   if (size <= 0) {
      printf("The number of integers must be positive.\n");
      return 1;
   }
   int arr[size];
   printf("Enter %d integers:\n", size);
   for (int i = 0; i < size; i++) {
      printf("Integer %d: ", i + 1);
      scanf("%d", &arr[i]);
   }
   for (int i = 0; i < size; i++) {
      sum += arr[i];
   }
   printf("The sum of the entered integers is: %d\n", sum);
   return 0;
}
```

7 - DISPLAY CHARACTER TYPE ARRAY.

ANS =>

```
#include <stdio.h>

int main() {
   char arr[] = {'H', 'e', 'l', 'l', 'o', ' ', 'W', 'o', 'r', 'l', 'd'};
   int size = sizeof(arr) / sizeof(arr[0]);
   printf("Character array elements:\n");
   for (int i = 0; i < size; i++) {
      printf("%c ", arr[i]);
   }
   printf("\n");
   return 0;
}
```

8 - DISPLAY MATRIX ADDITION.

ANS =>

```
#include <stdio.h>

#define MAX 10

int main() {

   int rows, cols;

   int matrix1[MAX][MAX], matrix2[MAX][MAX], result[MAX][MAX];

   printf("Enter the number of rows and columns for the matrices: ");

   scanf("%d %d", &rows, &cols);

   if (rows <= 0 || cols <= 0 || rows > MAX || cols > MAX) {

      printf("Invalid matrix dimensions. Rows and columns must be between 1
and %d.\n", MAX);

      return 1;

   }

   printf("Enter elements for matrix A:\n");

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

      for (int j = 0; j < cols; j++) {

         printf("Element [%d][%d]: ", i, j);

         scanf("%d", &matrix1[i][j]);

      }

   }

   printf("Enter elements for matrix B:\n");

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

      for (int j = 0; j < cols; j++) {

         printf("Element [%d][%d]: ", i, j);
```

```
            scanf("%d", &matrix2[i][j]);
        }
    }
    for (int i = 0; i < rows; i++) {
        for (int j = 0; j < cols; j++) {
            result[i][j] = matrix1[i][j] + matrix2[i][j];
        }
    }
    printf("Matrix A:\n");
    for (int i = 0; i < rows; i++) {
        for (int j = 0; j < cols; j++) {
            printf("%d ", matrix1[i][j]);
        }
        printf("\n");
    }
    printf("Matrix B:\n");
    for (int i = 0; i < rows; i++) {
        for (int j = 0; j < cols; j++) {
            printf("%d ", matrix2[i][j]);
        }
        printf("\n");
    }
    printf("Sum of Matrix A and Matrix B:\n");
    for (int i = 0; i < rows; i++) {
        for (int j = 0; j < cols; j++) {
```

```
            printf("%d ", result[i][j]);
        }
        printf("\n");
    }

    return 0;
}
```

9 - DISPLAY MULTIPLICATION OF ARRAY ELEMENTS.

ANS =>

```
#include <stdio.h>


int main() {
   int n;
   int arr[MAX] = 100;
   long long product = 1;
   printf("Enter the number of elements in the array (max %d): ", MAX);
   scanf("%d", &n);
   if (n <= 0 || n > MAX) {
      printf("Invalid number of elements %d\n", MAX);
      return 1;
   }
   printf("Enter %d elements:\n", n);
   for (int i = 0; i < n; i++) {
      printf("Element %d: ", i + 1);
      scanf("%d", &arr[i]);
   }
   for (int i = 0; i < n; i++) {
      product *= arr[i];
   }
   printf("The product of the array elements is: %lld\n", product);
   return 0;
}
```