MCA Semester 1	Subject : Advanced Data Structures Lab
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Roll No. : MCA2511	Date : 26-09-2025

1. Program to perform Selection Sort on an array of numbers.

Code:

02Selection_Sort.java

```
import java.util.Scanner;

class SelSort
{
	public static void main(String[] args)
	{
		int num, i, j, minIdx, temp;

		Scanner input = new Scanner(System.in);

		System.out.println("Enter the number of integers to sort: ");
		num = input.nextInt();

		int array[] = new int[num];
		System.out.println("Enter " + num + " integers: ");
		for(i = 0; i<num; i++)
		{
			array[i] = input.nextInt();
		}//end of for to take input in array

		//Selection Sort
		for(i=0; i<num-1;i++)
		{
			minIdx = i;

			//Find Minimum Index
			for(j=i+1; j<num; j++)
			{
				if(array[j] < array[minIdx])
				{
					minIdx = j;
				}
			}// end of for j

			//Exchange number at minIdx and start of Unsorted Region(i)
			temp = array[i];
			array[i] = array[minIdx];
			array[minIdx] = temp;
```

```
                }//end of for i

                System.out.println("Sorted Array");
                for(i=0; i<num; i++)
                {
                        System.out.println(array[i]);
                }
        }//end of pvsm
}//end of class
```

Output:

```
C:\Users\mcamock\Desktop\DS_Lab>javac 02SelectionSort.java

C:\Users\mcamock\Desktop\DS_Lab>java SelSort
Enter the number of integers to sort:
5
Enter 5 integers:
12
5
3
4
8
Sorted Array
3
4
5
8
12
```