10. Implement All-Pairs Shortest Paths Problem using Floyds algorithm.

```
import java.util.Scanner;
public class Floyds
{
	static int a[][];
	static int n;

	public static void main(String args[])
	{
		System.out.println("Enter the number of vertices\n");
		Scanner scanner = new Scanner(System.in);
		n = scanner.nextInt();
		a = new int[n][n];
		System.out.println("Enter the Cost Matrix (999 for infinity) \n");
		for (int i = 0; i < n; i++)
		{
			for (int j = 0; j < n; j++)
			{
				a[i][j] = scanner.nextInt();
			}
		}
		getPath();
		PrintMatrix();
		scanner.close();
	}

	public static void getPath()
	{
		for (int k = 0; k < n; k++)
		{
			for (int i = 0; i < n; i++)
				for (int j = 0; j < n; j++)
					if ((a[i][k] + a[k][j]) < a[i][j])
						a[i][j] = a[i][k] + a[k][j];
		}
	}

	public static void PrintMatrix()
	{
		System.out.println("The All Pair Shortest Path Matrix is:\n");
		for(int i=0; i<n; i++)
		{
			for(int j=0; j<n; j++)
				System.out.print(a[i][j] +" ");
			System.out.println();
		}
	}
}
```