

Lab 8

Problem Statement: Fuzzy Sets

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Code:

```
package AI;

import java.util.*;

public class fuzzySet {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        double r = 1;

        double x;

        System.out.println("Enter number whose membership is to
be calculated");

        x = sc.nextDouble();

        double a = 5 / Math.max(x, 5);

        double b = x / Math.max(x, 5);

        double y = r * (Math.abs(a - b));

        double v = 1 - y;

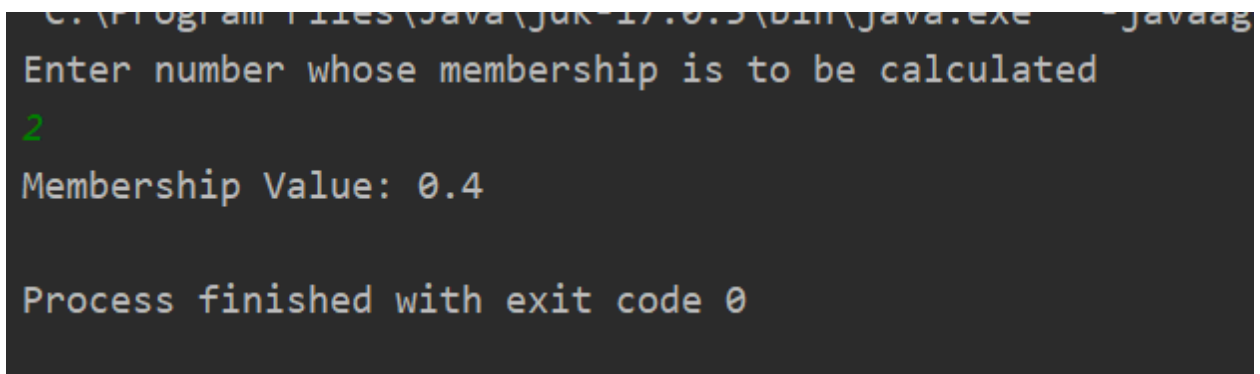
        if(y == 0){
```

```

        System.out.println("Full Member");
    }
    else if(0 < y && y<1){
        System.out.println("Membership Value: " + v);
    }
    else if(y >= 1){
        System.out.println("Non Member");
    }
}
}

```

Output:



The screenshot shows a terminal window with the following text:

```

C:\Program Files\Java\jdk-17.0.5\bin\java.exe -javaag
Enter number whose membership is to be calculated
2
Membership Value: 0.4

Process finished with exit code 0

```

Graph:

Fuzzy Set Membership Function

