

LAPORAN RESMI
Workshop Kecerdasan Buatan
Sistem Pakar



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2022

Sistem Pakar penyakit Gastro Usus

⇒ Source Code

```
import java.util.Scanner;

public class GastroUsus{

    public static void main(String arg[]){

        float[][][] arraycase = new float[5][15][25];

        float temp;

        Scanner keyboard = new Scanner(System.in);

        System.out.println("=====
=====");

        System.out.println("Infeksi Sistem Gastro Usus\nMasukkan Input 1 untuk
jawaban 'Yes' atau 2 untuk jawaban 'No'");

        System.out.print("1. Buang Air Besar (lebih dari 2 kali) : ");

        temp = keyboard.nextFloat();

        if(temp == 1){

            arraycase[0][0][0] = 1;

            arraycase[1][0][0] = 1;

            arraycase[2][0][0] = 1;

            arraycase[4][0][0] = 1;

        }

        System.out.print("2. Berak Encer? : ");

        temp = keyboard.nextFloat();

        if(temp == 1){

            arraycase[0][0][1] = 1;
```

```
    arraycase[1][0][1] = 1;
    arraycase[2][0][1] = 1;
    arraycase[4][0][1] = 1;
}
System.out.print("3. Berak Berdarah? : ");
temp = keyboard.nextFloat();
if(temp == 1){
    arraycase[4][0][2] = 1;
}
System.out.print("4. Lesu dan tidak bergairah? : ");
temp = keyboard.nextFloat();
if(temp == 1){
    arraycase[0][0][2] = 1;
    arraycase[0][1][0] = 1;
    arraycase[0][2][0] = 1;
    arraycase[0][3][0] = 1;

    arraycase[1][0][2] = 1;
    arraycase[1][1][0] = 1;
    arraycase[1][2][0] = 1;

    arraycase[2][0][2] = 1;
    arraycase[2][1][0] = 1;
    arraycase[2][2][0] = 1;
    arraycase[2][3][0] = 1;
    arraycase[2][4][0] = 1;
```

```
arraycase[3][0][0] = 1;
arraycase[3][1][0] = 1;

arraycase[4][0][3] = 1;
arraycase[4][1][0] = 1;
arraycase[4][2][0] = 1;
}

System.out.print("5. Tidak Selera Makan? : ");
temp = keyboard.nextFloat();
if(temp == 1){
    arraycase[0][0][3] = 1;
    arraycase[0][1][1] = 1;

    arraycase[1][0][3] = 1;
    arraycase[1][1][1] = 1;

    arraycase[2][0][3] = 1;
    arraycase[2][1][1] = 1;
    arraycase[2][3][1] = 1;

    arraycase[3][0][1] = 1;

    arraycase[4][0][4] = 1;
    arraycase[4][2][1] = 1;
}

System.out.print("6. Merasa mual dan sering muntah (lebih dari 1 kali) : ");
temp = keyboard.nextFloat();
```

```
if(temp == 1){
    arraycase[0][1][2] = 1;

    arraycase[1][1][2] = 1;

    arraycase[2][1][1] = 1;

    arraycase[3][0][2] = 1;
}

System.out.print("7. Merasa sakit di bagian perut? : ");
temp = keyboard.nextFloat();
if(temp == 1){
    arraycase[0][2][1] = 1;

    arraycase[1][2][1] = 1;

    arraycase[2][2][1] = 1;

    arraycase[4][1][1] = 1;
}

System.out.print("8. Tekanan darah rendah? : ");
temp = keyboard.nextFloat();
if(temp == 1){
    arraycase[0][3][1] = 1;

    arraycase[1][3][0] = 1;
```

```
        arraycase[2][4][1] = 1;
    }
    System.out.print("9. Pusing? : ");
    temp = keyboard.nextFloat();
    if(temp == 1){
        arraycase[0][3][2]=1;

        arraycase[2][4][2]=1;

        arraycase[4][2][2]=1;
    }
    System.out.print("10. Pingsan? : ");
    temp = keyboard.nextFloat();
    if(temp == 1){
        arraycase[1][3][1]=1;
    }
    System.out.print("11. Suhu badan tinggi? : ");
    temp = keyboard.nextFloat();
    if(temp == 1){
        arraycase[2][3][4]=1;
        arraycase[2][4][2]=1;

        arraycase[4][2][3]=1;
    }
    System.out.print("12. Luka di bagian tertentu? : ");
    temp = keyboard.nextFloat();
    if(temp == 1){
```

```
        arraycase[2][4][4]=1;
    }
    System.out.print("13. Tidak dapat menggerakkan anggota badan tertentu? : ");
    temp = keyboard.nextFloat();
    if(temp == 1){
        arraycase[3][1][1]=1;
    }
    System.out.print("14. Memakan sesuatu? : ");
    temp = keyboard.nextFloat();
    if(temp == 1){
        arraycase[0][4][0]=1;

        arraycase[1][4][0]=1;

        arraycase[2][5][0]=1;

        arraycase[3][2][0]=1;
    }
    System.out.print("15. Memakan daging? : ");
    temp = keyboard.nextFloat();
    if(temp == 1){
        arraycase[0][4][1]=1;

        arraycase[2][5][1]=1;
    }
    System.out.print("16. Memakan jamur? : ");
    temp = keyboard.nextFloat();
```

```

if(temp == 1){
    arraycase[1][4][1]=1;
}

System.out.print("17. Memakan makanan kaleng? : ");
temp = keyboard.nextFloat();
if(temp == 1){
    arraycase[3][2][1]=1;
}

System.out.print("18. Membeli susu? : ");
temp = keyboard.nextFloat();
if(temp == 1){
    arraycase[4][3][0]=1;
}

System.out.print("19. Meminum susu? : ");
temp = keyboard.nextFloat();
if(temp == 1){
    arraycase[4][3][1]=1;
}

for(int j=0;j<=6;j++){
    for(int i=0;i<=20;i++)
    {
        arraycase[0][j][21]+=arraycase[0][j][i];
        arraycase[1][j][21]+=arraycase[1][j][i];
        arraycase[2][j][21]+=arraycase[2][j][i];
        arraycase[3][j][21]+=arraycase[3][j][i];
        arraycase[4][j][21]+=arraycase[4][j][i];
    }
}

```



```
}  
  
arraycase[0][0][21]=arraycase[0][0][21]*100/4;  
arraycase[0][1][21]=arraycase[0][1][21]*100/3;  
arraycase[0][2][21]=arraycase[0][2][21]*100/2;  
arraycase[0][3][21]=arraycase[0][3][21]*100/3;  
arraycase[0][4][21]=arraycase[0][4][21]*100/2;  
  
arraycase[1][0][21]=arraycase[1][0][21]*100/4;  
arraycase[1][1][21]=arraycase[1][1][21]*100/3;  
arraycase[1][2][21]=arraycase[1][2][21]*100/2;  
arraycase[1][3][21]=arraycase[1][3][21]*100/2;  
arraycase[1][4][21]=arraycase[1][4][21]*100/2;  
  
arraycase[2][0][21]=arraycase[2][0][21]*100/4;  
arraycase[2][1][21]=arraycase[2][1][21]*100/3;  
arraycase[2][2][21]=arraycase[2][2][21]*100/2;  
arraycase[2][3][21]=arraycase[2][3][21]*100/4;  
arraycase[2][4][21]=arraycase[2][4][21]*100/4;  
arraycase[2][5][21]=arraycase[2][5][21]*100/2;  
  
arraycase[3][0][21]=arraycase[3][0][21]*100/3;  
arraycase[3][1][21]=arraycase[3][1][21]*100/2;  
arraycase[3][2][21]=arraycase[3][2][21]*100/2;  
  
arraycase[4][0][21]=arraycase[4][0][21]*100/5;  
arraycase[4][1][21]=arraycase[4][1][21]*100/2;  
arraycase[4][2][21]=arraycase[4][2][21]*100/4;
```

```

arraycase[4][3][21]=arraycase[4][3][21]*100/2;

Scanner input = new Scanner(System.in);

System.out.print("Masukkan Tresshold: ");

double tressHold = input.nextFloat();


System.out.println("=====
=====");

    System.out.println("Persentase Infeksi Gastro Usus");


System.out.println("=====
=====");

    System.out.println("\nKeracunan Staphylococcus Aureus");

    System.out.println("1. Mencret = " + arraycase[0][0][21] + "% dari 20%");
    System.out.println("2. Muntah = " + arraycase[0][1][21] + "% dari 20%");
    System.out.println("3. Sakit Perut = " + arraycase[0][2][21] + "% dari 20%");
    System.out.println("4. Darah Rendah = " + arraycase[0][3][21] + "% dari 20%");
    System.out.println("5. Makan Daging = " + arraycase[0][4][21] + "% dari 20%");
    double avg1 = (arraycase[0][0][21] + arraycase[0][1][21] + arraycase[0][2][21] +
arraycase[0][3][21] + arraycase[0][4][21]) / 5;

    // System.out.println("hasil rata : " + avg1);


    System.out.println("\nKeracunan Jamur Beracun");

    System.out.println("1. Mencret = " + arraycase[1][0][21] + "% dari 20%");
    System.out.println("2. Muntah = " + arraycase[1][1][21] + "% dari 20%");
    System.out.println("3. Sakit Perut = " + arraycase[1][2][21] + "% dari 20%");
    System.out.println("4. Koma = " + arraycase[1][3][21] + "% dari 20%");

```

```

    System.out.println("5. Makan jamur = " + arraycase[1][4][21] + "% dari 20%");
    double avg2 = (arraycase[1][0][21] + arraycase[1][1][21] + arraycase[1][2][21] +
arraycase[1][3][21] + arraycase[1][4][21]) / 5;
    // double avg2 = (arraycase[1][0][21] + arraycase[1][1][21] + )

    System.out.println("\nKeracunan Salmonellae");
    System.out.println("1. Mencret = " + arraycase[2][0][21] + "% dari 16.66%");
    System.out.println("2. Muntah = " + arraycase[2][1][21] + "% dari 16.66%");
    System.out.println("3. Sakit Perut = " + arraycase[2][2][21] + "% dari 16.66%");
    System.out.println("4. Demam = " + arraycase[2][3][21] + "% dari 16.66%");
    System.out.println("5. Septicaemia = " + arraycase[2][4][21] + "% dari 16.66%");
    System.out.println("6. Makan daging = " + arraycase[2][5][21] + "% dari
16.66%");

    double avg3 = (arraycase[2][0][21] + arraycase[2][1][21] + arraycase[2][2][21] +
arraycase[2][3][21] + arraycase[2][4][21] + arraycase[2][5][21]) / 6;

    System.out.println("\nKeracunan Clostridium Botulinum");
    System.out.println("1. Muntah = " + arraycase[3][0][21] + "% dari 33.33%");
    System.out.println("2. Lumpuh = " + arraycase[3][1][21] + "% dari 33.33%");
    System.out.println("3. Makan makanan kaleng = " + arraycase[3][2][21] + "% dari
33.33%");

    double avg4 = (arraycase[3][0][21] + arraycase[3][1][21] + arraycase[3][2][21]) /
5;

    System.out.println("\nKeracunan Campylobacter");
    System.out.println("1. Mencret berdarah = " + arraycase[4][0][21] + "% dari
25%");

```

```

System.out.println("2. Sakit perut = " + arraycase[4][1][21] + "% dari 25%");
System.out.println("3. Demam = " + arraycase[4][2][21] + "% dari 25%");
System.out.println("4. Minum Susu = " + arraycase[4][3][21] + "% dari 25%");
double avg5 = (arraycase[4][0][21] + arraycase[4][1][21] + arraycase[4][2][21] +
arraycase[4][3][21]) / 5;

System.out.println("=====
=====");

    System.out.println("Hasil Sistem Pakar dengan Tresshold sebesar " + tressHold
+ ", Maka: ");
    if(avg1 >= tressHold)
        System.out.println("Anda mengalami Keracunan Staphylococcus Aureus,
dengan prosentase sebesar: " + avg1);
    else if(avg2 >= tressHold)
        System.out.println("Anda mengalami Keracunan Jamur Beracun, dengan
prosentase sebesar: " + avg2);
    else if(avg3 >= tressHold)
        System.out.println("Anda mengalami Keracunan Salmonellae, dengan
prosentase sebesar: " + avg3);
    else if(avg4 >= tressHold)
        System.out.println("Anda mengalami Keracunan Clostridium Botulinum, dengan
prosentase sebesar: " + avg4);
    else if(avg5 >= tressHold)
        System.out.println("Anda mengalami Keracunan Campylobacter, dengan
prosentase sebesar: " + avg5);
    else System.out.println("Anda sehat, dan tidak ada penyakit Gastro Usus yang
mendekati");

```

```

System.out.println("=====
=====");

}

}

```

⇒ Output

```

system-pakar > GastroUsus.java > GastroUsus > main(String[])
259 System.out.println("=====");
260 System.out.println("Hasil Sistem Pakar dengan Tresshold sebesar " + tressHold + ", Maka: ");
261 if(avg1 >= tressHold)

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL
=====
Infeksi Sistem Gastro Usus
Masukkan Input 1 untuk jawaban 'Yes' atau 2 untuk jawaban 'No'
1. Buang Air Besar (lebih dari 2 kali) : 1
2. Berak Encer? : 1
3. Berak Berdarah? : 2
4. Lesu dan tidak bergairah? : 1
5. Tidak Selera Makan? : 1
6. Merasa mual dan sering muntah (lebih dari 1 kali) : 2
7. Merasa sakit di bagian perut? : 2
8. Tekanan darah rendah? : 2
9. Pusing? : 1
10. Pingsan? : 2
11. Suhu badan tinggi? : 1
12. Luka di bagian tertentu? : 2
13. Tidak dapat menggerakkan anggota badan tertentu? : 2
14. Memakan sesuatu? : 1
15. Memakan daging? : 2
16. Memakan jamur? : 1
17. Memakan makanan kaleng? : 1
18. Membeli susu? : 1
19. Meminum susu? : 1
Masukkan Tresshold: 70
=====
Persentase Infeksi Gastro Usus
=====
Keracunan Staphylococcus Aureus
1. Mencret = 100.0% dari 20%

```

The screenshot shows a macOS desktop with a Java IDE (GastroUsus.java) and a terminal window. The IDE displays code for a system pakar simulation. The terminal shows the output of the program, including a list of symptoms and their probabilities, and a final diagnosis message.

Code in GastroUsus.java:

```

259 System.out.println("=====");
260 System.out.println("Hasil Sistem Pakar dengan Tresshold sebesar " + tressHold + ", Maka: ");
261 if(avgl >= tressHold)

```

Terminal Output:

```

1. Mencret = 100.0% dari 20%
2. Muntah = 66.666664% dari 20%
3. Sakit Perut = 50.0% dari 20%
4. Koma = 0.0% dari 20%
5. Makan jamur = 100.0% dari 20%

Keracunan Salmonellae
1. Mencret = 100.0% dari 16.66%
2. Muntah = 66.666664% dari 16.66%
3. Sakit Perut = 50.0% dari 16.66%
4. Demam = 75.0% dari 16.66%
5. Septicaemia = 50.0% dari 16.66%
6. Makan daging = 50.0% dari 16.66%

Keracunan Clostridium Botulinum
1. Muntah = 66.666664% dari 33.33%
2. Lumpuh = 50.0% dari 33.33%
3. Makan makanan kaleng = 100.0% dari 33.33%

Keracunan Campylobacter
1. Mencret berdarah = 80.0% dari 25%
2. Sakit perut = 50.0% dari 25%
3. Demam = 100.0% dari 25%
4. Minum Susu = 100.0% dari 25%

=====
Hasil Sistem Pakar dengan Tresshold sebesar 70.0, Maka:
Anda sehat, dan tidak ada penyakit Gastro Usus yang mendekati
=====
masbek@masbeks-MacBook-Pro AI %

```