Nama: Isep Lutpi Nur

NPM: 2113191079

Tugas: Minggu 5 - WEIGHT AGGREGATED SUM PRODUCK ASSESMENT (WASPAS)

**Buatlah kasus dengan penyelesaian waspas**

**Studi Kasus:** Penentuan asisten laboratorium menggunakan metode WASPAS

**Data:**

**Bobot Kriteria:**

Nilai Ujian = 0.6

IPK = 0.25

Semester = 0.15

Cost (Min) = {Nilai Ujian, IPK}

Benefit (Max) = {Semester}

**Table data:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Nama | NU | IPK | Smstr |
| 1 | Rivan kurnia | 70 | 3.20 | 6 |
| 2 | Adistia Ramadhani | 80 | 3.30 | 6 |
| 3 | Akbar Maulana | 85 | 3.50 | 4 |
| 4 | Alam Nurzaman | 75 | 3.10 | 6 |
| 5 | Dara Atria | 85 | 3.70 | 6 |
| 6 | Deri Kurniawan | 80 | 3.30 | 4 |
| 7 | Farhan Aziz | 70 | 3.30 | 4 |
| 8 | Iman Faturahman | 75 | 3.20 | 6 |
| 9 | Irfan Ramdani | 80 | 3.40 | 4 |
| 10 | Isep Lutpi Nur | 90 | 3.70 | 4 |

**Implementasi**:

1. Membuat Matriks Keputusan

|  |  |  |  |
| --- | --- | --- | --- |
| **X=** | 70 | 3.20 | 6 |
|  | 80 | 3.30 | 6 |
|  | 85 | 3.50 | 4 |
|  | 75 | 3.10 | 6 |
|  | 85 | 3.70 | 6 |
|  | 80 | 3.30 | 4 |
|  | 70 | 3.30 | 4 |
|  | 75 | 3.20 | 6 |
|  | 80 | 3.40 | 4 |
|  | 90 | 3.70 | 4 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Nama | NU | IPK | Smstr |
| 1 | Rivan kurnia | 70 | 3.20 | 6 |
| 2 | Adistia Ramadhani | 80 | 3.30 | 6 |
| 3 | Akbar Maulana | 85 | 3.50 | 4 |
| 4 | Alam Nurzaman | 75 | 3.10 | 6 |
| 5 | Dara Atria | 85 | 3.70 | 6 |
| 6 | Deri Kurniawan | 80 | 3.30 | 4 |
| 7 | Farhan Aziz | 70 | 3.30 | 4 |
| 8 | Iman Faturahman | 75 | 3.20 | 6 |
| 9 | Irfan Ramdani | 80 | 3.40 | 4 |
| 10 | Isep Lutpi Nur | 90 | 3.70 | 4 |

1. Menghitung nilai normalisasi Matriks setiap kriteria
2. Kriteria Nilai Ujian -> Cost(Min) ->

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | i | **NU** | IPK | Smstr |
| **X=** | 1 | **70** | 3.2 | 6 |
| 2 | **80** | 3.3 | 6 |
| 3 | **85** | 3.5 | 4 |
| 4 | **75** | 3.1 | 6 |
| 5 | **85** | 3.7 | 6 |
| 6 | **80** | 3.3 | 4 |
| 7 | **70** | 3.3 | 4 |
| 8 | **75** | 3.2 | 6 |
| 9 | **80** | 3.4 | 4 |
| 10 | **90** | 3.7 | 4 |
|  |  | **Min** | Min | Max |
|  |  | **70** | 3.1 | 6 |
|  |  | **0.60** | 0.25 | 0.15 |

1. Kriteria IPK -> Cost(Min) Cost(Min) ->

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | i | NU | **IPK** | Smstr |
| **X=** | 1 | 70 | **3.2** | 6 |
| 2 | 80 | **3.3** | 6 |
| 3 | 85 | **3.5** | 4 |
| 4 | 75 | **3.1** | 6 |
| 5 | 85 | **3.7** | 6 |
| 6 | 80 | **3.3** | 4 |
| 7 | 70 | **3.3** | 4 |
| 8 | 75 | **3.2** | 6 |
| 9 | 80 | **3.4** | 4 |
| 10 | 90 | **3.7** | 4 |
|  |  | Min | **Min** | Max |
|  |  | 70 | **3.1** | 6 |
|  |  | 0.60 | **0.25** | 0.15 |

1. Kriteria Semester -> Benefit(Max) ->

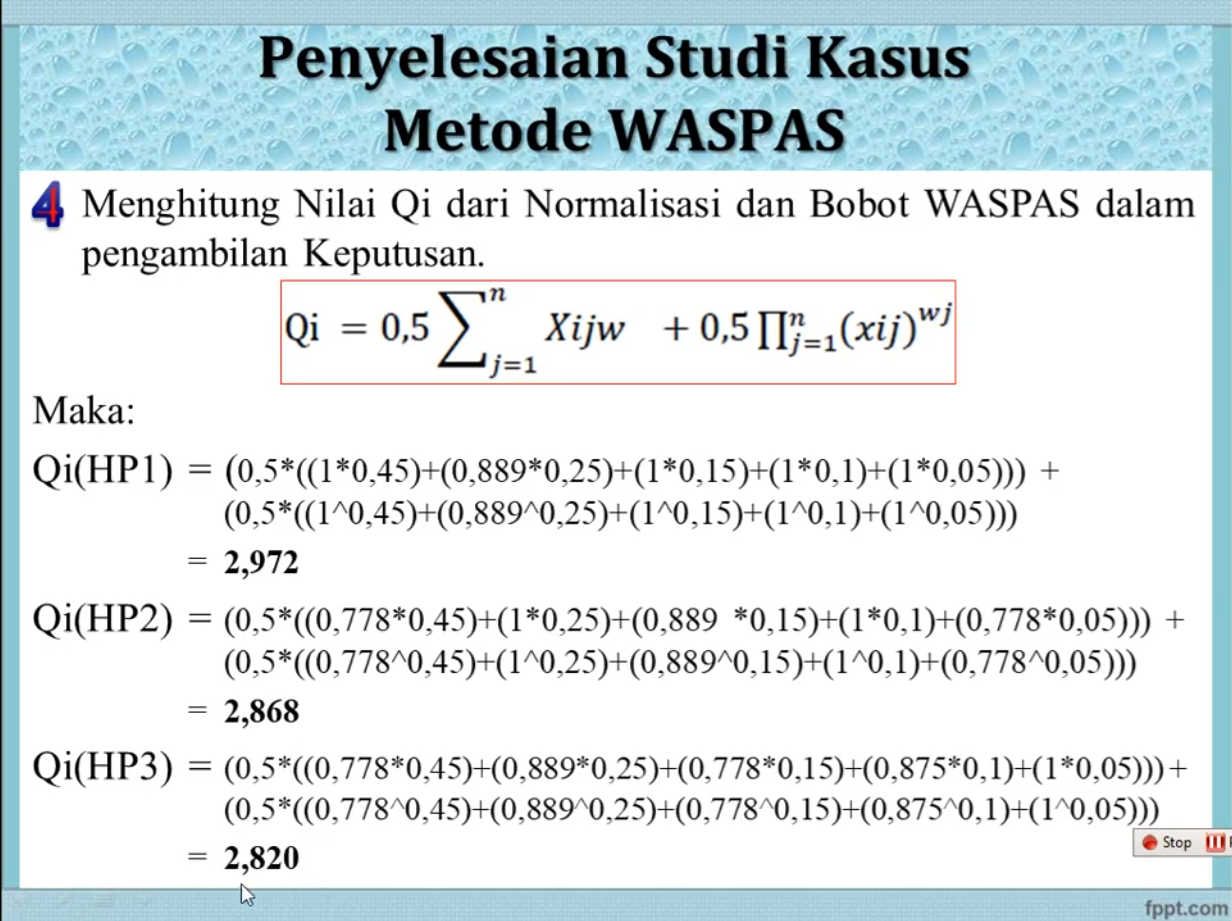
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | i | NU | IPK | **Smstr** |
| **X=** | 1 | 70 | 3.2 | **6** |
| 2 | 80 | 3.3 | **6** |
| 3 | 85 | 3.5 | **4** |
| 4 | 75 | 3.1 | **6** |
| 5 | 85 | 3.7 | **6** |
| 6 | 80 | 3.3 | **4** |
| 7 | 70 | 3.3 | **4** |
| 8 | 75 | 3.2 | **6** |
| 9 | 80 | 3.4 | **4** |
| 10 | 90 | 3.7 | **4** |
|  |  | Min | Min | **Max** |
|  |  | 70 | 3.1 | **6** |
|  |  | 0.60 | 0.25 | **0.15** |

1. Didapatlah normalisasi dari setiap kriteria

|  |  |  |  |
| --- | --- | --- | --- |
| **X=** | 1.000 | 0.969 | 1.000 |
| 0.875 | 0.939 | 1.000 |
| 0.824 | 0.886 | 0.667 |
| 0.933 | 1.000 | 1.000 |
| 0.824 | 0.838 | 1.000 |
| 0.875 | 0.939 | 0.667 |
| 1.000 | 0.939 | 0.667 |
| 0.933 | 0.969 | 1.000 |
| 0.875 | 0.912 | 0.667 |
| 0.778 | 0.838 | 0.667 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | i | NU | IPK | Smstr |
| **X=** | 1 | 70 | 3.2 | 6 |
| 2 | 80 | 3.3 | 6 |
| 3 | 85 | 3.5 | 4 |
| 4 | 75 | 3.1 | 6 |
| 5 | 85 | 3.7 | 6 |
| 6 | 80 | 3.3 | 4 |
| 7 | 70 | 3.3 | 4 |
| 8 | 75 | 3.2 | 6 |
| 9 | 80 | 3.4 | 4 |
| 10 | 90 | 3.7 | 4 |
|  |  | Min | Min | Max |
|  |  | 70 | 3.1 | 6 |
|  |  | 0.60 | 0.25 | 0.15 |

1. Menghitung nilai Qi dari Normalisasi dan Bobot WASPAS dalam pengambilan keputusan



1. Perhitungan Qi
2. Qi(Rivan kurnia)
3. Qi(Adistia Ramadhani)
4. Qi(Akbar Maulana)
5. Qi(Alam Nurzaman)
6. Qi(Dara Atria)
7. Qi(Deri Kurniawan)
8. Qi(Farhan Aziz)
9. Qi(Iman Faturahman)
10. Qi(Irfan Ramdani)
11. Qi(Isep Lutpi Nur)
12. Perangkingan dan hasil perhitungan.

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Nama | Nilai Qi | Rangking |
| 1 | Rivan kurnia | 1.992 | 1 |
| 2 | Adistia Ramadhani | 1.909 | 5 |
| 3 | Akbar Maulana | 1.808 | 9 |
| 4 | Alam Nurzaman | 1.96 | 2 |
| 5 | Dara Atria | 1.85 | 7 |
| 6 | Deri Kurniawan | 1.854 | 6 |
| 7 | Farhan Aziz | 1.93 | 4 |
| 8 | Iman Faturahman | 1.952 | 3 |
| 9 | Irfan Ramdani | 1.847 | 8 |
| 10 | Isep Lutpi Nur | 1.767 | 10 |

1. Perhitungan

Perhitungan menggunakan Microsoft Excel

