NAMA: NANDA PRAYOGI

NIM: A11.2021.13505

MATA KULIAH: SISTEM TEMU KEMBALI INFORMASI

KELOMPOK: A11.4703

STATUS: LATIHAN SOAL MINGGU KE-9

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | TEKS | CLASS |
| TARAINING | D1 | Sepakbola PSIS tahun ini semakin  indah. | Olahraga |
|  | D2 | Presiden Indonesia menaikan  harga BBM. | Politik |
|  | D3 | Partai politik Indonesia berburu  suara. | Politik |
|  | D4 | Timnas Indonesia gagal juara AFC | Olahraga |
| TESTING | D5 | Presiden menaikan gaji Timnas  Indonesia | ? |

* Jika dokumen-dokumen teks diatas diklasifikasikan ke dalam dua kelas yaitu Class 1 (Olahraga) = D1&D4 dan Class 2 (Politik) = D2&D3
* Pertanyaan : Menggunakan k-NN, dengan nilai K=3, Tentukan kelas dari D5!

LANGKAH 1a:

Melakukan tokenisasi, stop world removal, stemming.

|  |  |  |
| --- | --- | --- |
| Dokumen | Term yang Mewakili Dokumen | Class |
| D1 | sepakbola psis tahun indah | Olahraga |
| D2 | presiden indonesia naik harga bbm | Politik |
| D3 | partai politik indonesia buru suara | Politik |
| D4 | timnas indonesia gagal juara afc | Olahraga |
| D5 | presiden naik gaji timnas indonesia | ? |

LANGKAH 1b:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | tf | | | | | | idf | Wdt=tf.idf | | | | |
| Term | D1 | D2 | D3 | D4 | D5 | df | log(n/df) | D1 | D2 | D3 | D4 | D5 |
| sepakbola | 1 |  |  |  |  | 1 | 0,69897 | 0,69897 | 0 | 0 | 0 | 0 |
| psis | 1 |  |  |  |  | 1 | 0,69897 | 0,69897 | 0 | 0 | 0 | 0 |
| tahun | 1 |  |  |  |  | 1 | 0,69897 | 0,69897 | 0 | 0 | 0 | 0 |
| indah | 1 |  |  |  |  | 1 | 0,69897 | 0,69897 | 0 | 0 | 0 | 0 |
| presiden |  | 1 |  |  | 1 | 2 | 0,39794 | 0 | 0,39794 | 0 | 0 | 0,39794 |
| indonesia |  | 1 | 1 | 1 | 1 | 4 | 0,09691 | 0 | 0,09691 | 0,09691 | 0,09691 | 0,09691 |
| naik |  | 1 |  |  | 1 | 2 | 0,39794 | 0 | 0,39794 | 0 | 0 | 0,39794 |
| harga |  | 1 |  |  |  | 1 | 0,69897 | 0 | 0,69897 | 0 | 0 | 0 |
| bbm |  | 1 |  |  |  | 1 | 0,69897 | 0 | 0,69897 | 0 | 0 | 0 |
| partai |  |  | 1 |  |  | 1 | 0,69897 | 0 | 0 | 0,69897 | 0 | 0 |
| politik |  |  | 1 |  |  | 1 | 0,69897 | 0 | 0 | 0,69897 | 0 | 0 |
| buru |  |  | 1 |  |  | 1 | 0,69897 | 0 | 0 | 0,69897 | 0 | 0 |
| suara |  |  | 1 |  |  | 1 | 0,69897 | 0 | 0 | 0,69897 | 0 | 0 |
| timnas |  |  |  | 1 | 1 | 2 | 0,39794 | 0 | 0 | 0 | 0,39794 | 0,39794 |
| gagal |  |  |  | 1 |  | 1 | 0,69897 | 0 | 0 | 0 | 0,69897 | 0 |
| juara |  |  |  | 1 |  | 1 | 0,69897 | 0 | 0 | 0 | 0,69897 | 0 |
| afc |  |  |  | 1 |  | 1 | 0,69897 | 0 | 0 | 0 | 0,69897 | 0 |
| gaji |  |  |  |  | 1 | 1 | 0,69897 | 0 | 0 | 0 | 0 | 0,69897 |

LANGKAH 2a:

|  |  |  |  |
| --- | --- | --- | --- |
| WD5\*Wdi | | | |
| D1 | D2 | D3 | D4 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0,158356 | 0 | 0 |
| 0 | 0,009392 | 0,009392 | 0,009392 |
| 0 | 0,158356 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0,158356 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0,326104 | 0,009392 | 0,167748 |

LANGKAH 2b:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Panjang Vektor | | | | |
| D1 | D2 | D3 | D4 | D5 |
| 0,488559 | 0 | 0 | 0 | 0 |
| 0,488559 | 0 | 0 | 0 | 0 |
| 0,488559 | 0 | 0 | 0 | 0 |
| 0,488559 | 0 | 0 | 0 | 0 |
| 0 | 0,158356 | 0 | 0 | 0,158356 |
| 0 | 0,009392 | 0,009392 | 0,009392 | 0,009392 |
| 0 | 0,158356 | 0 | 0 | 0,158356 |
| 0 | 0,488559 | 0 | 0 | 0 |
| 0 | 0,488559 | 0 | 0 | 0 |
| 0 | 0 | 0,488559 | 0 | 0 |
| 0 | 0 | 0,488559 | 0 | 0 |
| 0 | 0 | 0,488559 | 0 | 0 |
| 0 | 0 | 0,488559 | 0 | 0 |
| 0 | 0 | 0 | 0,158356 | 0,158356 |
| 0 | 0 | 0 | 0,488559 | 0 |
| 0 | 0 | 0 | 0,488559 | 0 |
| 0 | 0 | 0 | 0,488559 | 0 |
| 0 | 0 | 0 | 0 | 0,488559 |
| 1,954236 | 1,303222 | 1,963628 | 1,633425 | 0,973019 |
| 1,397939 | 1,141587 | 1,401295 | 1,278055 | 0,986417 |

LANGKAH 2c:

Cos(D5,D1) = = 0

Cos(D5,D2) = = **0,289588**

Cos(D5,D3) = = 0,006795

Cos(D5,D4) = = 0,133059

|  |  |  |  |
| --- | --- | --- | --- |
| D1 | D2 | D3 | D4 |
| 0 | 0,289588 | 0,006795 | 0,133059 |

LANGKAH 3:

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 2 | 3 | 4 |
| D2 | D4 | D3 | D1 |
| 0,289588 | 0,133059 | 0,006795 | 0 |

LANGKAH 4:

|  |  |  |
| --- | --- | --- |
| D2 | D4 | D3 |
| POLITIK | OLAHRAGA | POLITIK |

**D5 TERKLASIFIKASI KE KELAS POLITIK**