

LAMPIRAN

Percobaan Aplikasi

```

main_script.py X
E:\> Skripsi > last_code > main_script.py
10
11 cred = credentials.Certificate("thesis-afea3-firebase-adminsdk-c941w-4b972b5f3e.json")
12 firebase_admin.initialize_app(cred)
13
14 # data = pd.read_excel('1_judul SKRIPSI Prodi TI.xlsx', sheet_name="judul_fix")
15 # x, y = data.shape
16 # documents = []
17 # for i in range(4, x):
18 #     documents.append({
19 #         'npm': data.loc[i][1],
20 #         'nama': data.loc[i][2],
21 #         'judul': data.loc[i][3],
22 #     })
23
24 def tfidf_fuzzy_similarity(query, documents):
25     # TF-IDF vectorization
26     tfidf_vectorizer = TfidfVectorizer()
27     document = [i['judul'] for i in documents]
28     tfidf_matrix = tfidf_vectorizer.fit_transform(document)
29
30     # log base 10, ex: math.log10(x) or math.log(x, 10)
31
32     # Calculate similarity scores using TF-IDF
33     query_vector = tfidf_vectorizer.transform([query])
34     tfidf_scores = (query_vector * tfidf_matrix.T).A[0]
35
36     # Fuzzy matching and combining with TF-IDF scores
37     similarity_scores = []
38     for docs, tfidf_score in zip(documents, tfidf_scores):
39         doc = docs['judul']
40         fuzzy_score = fuzz.token_set_ratio(query, doc)
41         similarity_scores.append([docs, tfidf_score * (fuzzy_score / 100.0)]) # Combine TF-IDF and fuzzy scores
42     # Sort documents by combined similarity score
43     similarity_scores.sort(key=lambda x: x[1], reverse=True)
44     return similarity_scores

```

Coding Python TF-IDF dan Fuzzy Matching

The screenshot displays the Firebase console interface. On the left, the 'Project Overview' sidebar is visible, with 'Firestore Database' selected. The main area shows the 'Firestore' database with a collection named 'judul'. The collection contains three documents, each with a 'data' field containing 'judul', 'nama', and 'npm' attributes.

Document ID	judul	nama	npm
0	Pengenalan Daun Untuk Klasifikasi Menggunakan Image Processing	Muhammad Alfath	09010090
1	Rancang Bangun Aplikasi Bela Diri Muaythay Dan Winchun Berbasis Android	Febri Kurniatama	1211010092
2	3D Model Menstruation Cycles Sebagai Media Women Health Education		

Database Judul Skripsi