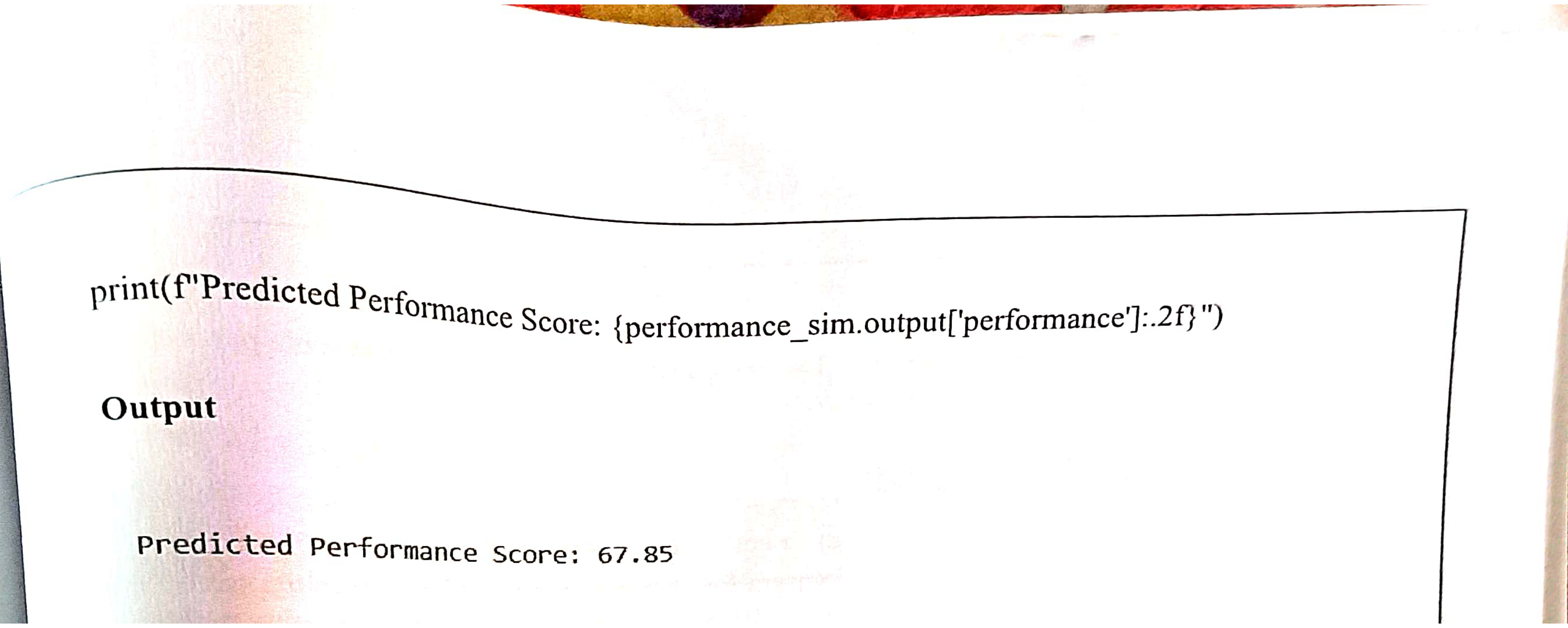
score based on fuzzy logic inference.

Program:

```
import numpy as np
import skfuzzy as fuzz
from skfuzzy import control as ctrl

# Define fuzzy variables
experience = ctrl.Antecedent(np.arange(0, 21, 1), 'experience')
success_rate = ctrl.Antecedent(np.arange(0, 101, 1), 'success_rate')
```

```
performance = ctrl.Consequent(np.arange(0, 101, 1), 'performance')

# Define fuzzy membership functions
experience['low'] = fuzz.trimf(experience.universe, [0, 0, 10])
experience['medium'] = fuzz.trimf(experience.universe, [5, 10, 15])
experience['high'] = fuzz.trimf(experience.universe, [10, 20, 20])

success_rate['low'] = fuzz.trimf(success_rate.universe, [0, 0, 50])
success_rate['medium'] = fuzz.trimf(success_rate.universe, [25, 50, 75])
success_rate['high'] = fuzz.trimf(success_rate.universe, [50, 100, 100])

performance['poor'] = fuzz.trimf(performance.universe, [0, 0, 50])
performance['average'] = fuzz.trimf(performance.universe, [25, 50, 75])
performance['excellent'] = fuzz.trimf(performance.universe, [50, 100, 100])

# Define fuzzy rules
rule1 = ctrl.Rule(experience['low'] & success_rate['low'], performance['poor'])
rule2 = ctrl.Rule(experience['medium'] | success_rate['medium'], performance['average'])
rule3 = ctrl.Rule(experience['high'] & success_rate['high'], performance['excellent'])

# Create FIS control system
performance_ctrl = ctrl.ControlSystem([rule1, rule2, rule3])
performance_sim = ctrl.ControlSystemSimulation(performance_ctrl)

# Provide input values
performance_sim.input['experience'] = 12  # Example: 12 years of experience
performance_sim.input['success_rate'] = 70  # Example: 70% success rate

# Compute fuzzy inference
performance_sim.compute()

# Print the output
```



```
print(f"Predicted Performance Score: {performance_sim.output['performance']:.2f}")
```

Output

```
Predicted Performance Score: 67.85
```

Result:

Thus the case-based discussion program has been implem successfully and the program has been uploaded in the Github link.