



Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

Experiment 10

Aim: Case Study on Expert System of real world.

Objective:

1. To develop an analysis and design ability in students to develop the AI applications in existing domain.
2. Also, to develop technical writing skill in students.

Theory:

1. This assignment asks students to study and understand recent AI applications.
2. Write your own report on the design of Expert system application for healthcare domain.

Code:

```
results = []
print("Football Selection")
knowledge_base = {
    'rule1': {
        'condition': lambda person: person['age'] >= 16,
        'result': 'You are eligible for Selection.'
    },
    'rule2': {
        'condition': lambda person: person['weight'] > 35,
        'result': 'You meet the weight requirement .'
    },
    'rule3': {
        'condition': lambda person: person['experience'] == 'yes',
        'result': 'You have passed the criteria'
    },
    'rule4': {
        'condition': lambda person: person['injury'] == 'no',
        'result': 'You have passed the medical test'
    }
}
```

```
# Define a function to evaluate the rules
def evaluate_rules(person):
    results = []
    for rule_name, rule_data in knowledge_base.items():
        if rule_data['condition'](person):
            results.append(rule_data['result'])
    return results
```

```
# Define a sample person
sample_person = {
    'age': int(input("age:")),
    'weight': int(input("weight:")),
    'experience': (input("any experience (Yes or No):")),
```



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```
'injury': input("any injuries(Yes or No):")
}

# Evaluate the rules for the sample person
eligibility_results = evaluate_rules(sample_person)
# print(len(eligibility_results))
# Print the results
if len(eligibility_results) >= 3:
    print("Selection Eligibility Results:")
    for result in eligibility_results:
        print(result)
else:
    print("You are not eligible for Selection.")
```

Output:

```
PS D:\Vartak college\SEM 5\AI EXP\New folder> py .\prolog.py
Football Selection
age:10
weight:40
any experience (Yes or No):no
any injuries(Yes or No):no
You are not eligible for Selection.
```

```
PS D:\Vartak college\SEM 5\AI EXP\New folder> py .\prolog.py
Football Selection
age:20
weight:65
any experience (Yes or No):yes
any injuries(Yes or No):no
Selection Eligibility Results:
You are eligible for Selection.
You meet the weight requirement .
You have passed the criteria
You have passed the medical test
PS D:\Vartak college\SEM 5\AI EXP\New folder>
```

Conclusion:

Thus, we have to develop an analysis and design ability in students to develop the AI applications in existing domain.