**Artificial Intelligence Lab Assignment 6**

knowledge\_base = {

"python": {

"description": "Python is a high-level, interpreted programming language known for its readability and simplicity.",

"uses": "Python is used for web development, data analysis, artificial intelligence, and scientific computing.",

"example": "An example of Python code is:\nprint('Hello, World!')"

},

"java": {

"description": "Java is a popular programming language known for its platform independence and robustness.",

"uses": "Java is used for developing desktop, web, and mobile applications, as well as large-scale enterprise systems.",

"example": "An example of Java code is:\npublic class HelloWorld {\n public static void main(String[] args) {\n System.out.println('Hello, World!');\n }\n}"

},

"c": {

"description": "C is a general-purpose, procedural programming language developed by Dennis Ritchie.",

"uses": "C is widely used for system programming, developing operating systems, and embedded systems programming.",

"example": "An example of C code is:\n#include <stdio.h>\nint main() {\n printf('Hello, World!');\n return 0;\n}"

},

"c++": {

"description": "C++ is a powerful, general-purpose programming language based on C.",

"uses": "C++ is used for developing desktop applications, games, and performance-critical applications.",

"example": "An example of C++ code is:\n#include <iostream>\nint main() {\n std::cout << 'Hello, World!' << std::endl;\n return 0;\n}"

},

"javascript": {

"description": "JavaScript is a programming language that enables interactive web pages.",

"uses": "JavaScript is used for client-side web development and building web applications.",

"example": "An example of JavaScript code is:\nconsole.log('Hello, World!');"

},

"ruby": {

"description": "Ruby is a dynamic, object-oriented programming language.",

"uses": "Ruby is used for web development, prototyping, and automation.",

"example": "An example of Ruby code is:\nputs 'Hello, World!'"

},

"php": {

"description": "PHP is a server-side scripting language designed for web development.",

"uses": "PHP is used for creating dynamic web pages and web applications.",

"example": "An example of PHP code is:\n<?php echo 'Hello, World!'; ?>"

}

}

def get\_user\_query():

print("Welcome to the Information Management System!")

query = input("What would you like to know? ")

return query

def search\_pattern(query):

query = query.lower()

knowledge = list(knowledge\_base.keys())

requirement = []

[requirement.append(i) for i in knowledge if i in query.split()]

if requirement == []:

print("\n-Sorry, I don't have information on that topic.\n")

else:

print("\n\n\t\t\t ==== RESPONSE ===\n")

for i in requirement:

print("-- DESCRIPTION : ",knowledge\_base[i]["description"])

print("-- USE : ", knowledge\_base[i]["uses"])

print("-- EXAMPLE : \n", knowledge\_base[i]["example"])

print("\n\n")

def main():

while True:

query = get\_user\_query()

if query.lower() == "exit":

break

response = search\_pattern(query)

if \_\_name\_\_ == "\_\_main\_\_":

main()

**OUTPUT**

PS C:\Users\hp\Desktop\AI> python assi6.py

Welcome to the Information Management System!

What would you like to know? I want to know about python and c++

==== RESPONSE ===

-- DESCRIPTION : Python is a high-level, interpreted programming language known for its readability and simplicity.

-- USE : Python is used for web development, data analysis, artificial intelligence, and scientific computing.

-- EXAMPLE :

An example of Python code is:

print('Hello, World!')

-- DESCRIPTION : C++ is a powerful, general-purpose programming language based on C.

-- USE : C++ is used for developing desktop applications, games, and performance-critical applications.

-- EXAMPLE :

An example of C++ code is:

#include <iostream>

int main() {

std::cout << 'Hello, World!' << std::endl;

return 0;

}

Welcome to the Information Management System!

What would you like to know? what is ruby

==== RESPONSE ===

-- DESCRIPTION : Ruby is a dynamic, object-oriented programming language.

-- USE : Ruby is used for web development, prototyping, and automation.

-- EXAMPLE :

An example of Ruby code is:

puts 'Hello, World!'

Welcome to the Information Management System!

What would you like to know? ML

-Sorry, I don't have information on that topic.

Welcome to the Information Management System!

What would you like to know? EXIT

PS C:\Users\hp\Desktop\AI>