

Coding Assignment

Q1) Program to remove punctuation's from string

Program:

```
remove_punctuation.py - D:/Semester 5/Software Engineering in Ai/remove_punctuation.py (...)
```

```
File Edit Format Run Options Window Help

import re
user_input=input("Enter String :")
remove_punctuation=re.sub(r'[\';,.:?!\"-]', '', user_input)
print(remove_punctuation)
```

OUTPUT:

```
>>>
= RESTART: D:/Semester 5/Software Engineering in Ai/remove_punctuation.py
Enter String :What would you like to have a dinner? WOW! what a great day.
What would you like to have a dinner WOW what a great day
>>>
```

Q) Program to sort letter in word of string

Program:

```
sort words.py - D:\Semester 5\Software Engineering in Ai\sort words.py (3.11.4)
```

```
File Edit Format Run Options Window Help

user_input=input("Enter Word: ")

word_list = []
length = len(user_input)
for i in range (0,length):
    word_list.append(user_input[i])

for i in range(0,length):
    for j in range(0,length):
        if word_list[i]<word_list[j]:
            word_list[i],word_list[j]=word_list[j],word_list[i]
sorted_word=""

for i in range(0,length):
    sorted_word = sorted_word+word_list[i]

print(sorted_word)
```

OUTPUT:

```
>>> type help , copyright , credits or license() for more information.
>>>
= RESTART: D:\Semester 5\Software Engineering in Ai\sort words.py
Enter Word: universal
aeilnrsuv
>>> |
```

Q)A program that converts text to speech or speech to text (optional).

Program:

```
import re
import pyttsx3
engine = pyttsx3.init()
data = {
    "What is NLP?": "NLP stands for Natural language which understands human languages such as Text, Image, Audio and gives results",
    "What is Artificial Intelligence(AI)?": "A technology that associates with human behavior is called AI",
    "What are the AI?": "Applications of AI include Expert System, Weather Prediction, Computer Vision, Robotics, NLP, and chat bots",
    "Can AI use for debugging?": 'Yes',
    "How AI Works?": "'AI works on different steps such as planning, pattern recognition, ontology, robotics, artificial life, and epistemology'",
    "Disadvantages of AI": "AI or machine is difficult to help in an emergency",
    "Tell me the problem today AI focuses on": "Traveling salesman problem",
    "What are genetics algorithm phases?": "'It includes Population initialization, fitness function, crossover, mutation, survivor selection, and termination'",
    "What are steps in NLP?": "It includes Morphological Analysis, semantic Analysis, Semantic Analysis, Discourse",
    'What Do You Do?': "Just Answer your questions",
    "What is your favourite programming language?": "python",
    "What is chatbot?": "Chatbot is a conversational agent based on AI",
    "What are types of chatbot?": "There are three types of chatbot custom chatbot ,smart chatbot, and intelligent chatbot",
    "How to become chatbot developer?": "'To become a chatbot developer you need to understand programming languages like python and good NLP knowlwdge'",
    "How I can improve my programming language?": "'To improve programming language practice coding regularly and start explore data structure'",
    "How many departments in university of karachi?": "There are 53 department and 20 research centers",
    "Name the highest mountain of the world?": "Mount Everest",
    "Name the highest mountain ranges in the world?": "Himalayas 8,849m",
    "What is capital of Austratia?": "Canberra",
    "Who is the author of harry potter book series?": "J.K rowling",
    "Which country knowns as Land of Sun Rising?": "Japan",
}
```

```
while True:
    inp=input("Enter your Question")
    if inp in data:
        engine.say(data[inp])
        engine.runAndWait()
    elif inp=="exit":
        break
    else:
        engine.say("Sorry I dont know")
        engine.runAndWait()
```

OUTPUT:

Speech Recognition program OUTPUT is not possible on hard copy