Name: Sonali Shintre
Roll No: C-29
Cource No:SPP II(Python)

Experiment No. 6

Aim: Perform string operations like slicing, concatenation, searching, and formatting.

1. Write a Python program to read a user's first and last name, create a nickname by slicing and concatenating parts of both names, search for a specific letter in the full name, and display the result using string formatting.

Code:

```
first = input("Enter your first name: ")
last = input("Enter your last name: ")

nickname = first[:3] + last[:3]
letter = input("Enter a letter to search in full name: ")
full_name = first + " " + last

print(f"Full Name: {full_name}")
print(f"Nickname: {nickname}")
print(f"Letter '{letter}' found: {letter in full_name}")
```

Output:

```
Enter your first name: Max
Enter your last name: Jonas
Enter a letter to search in full name: a
Full Name: Max Jonas
Nickname: MaxJon
Letter 'a' found: True
```

2. Write a program to process the string "PythonProgrammingBasics", extract specific parts using slicing, join them using concatenation, check if a substring exists, and display the formatted result.

Code:

```
text = "PythonProgrammingBasics"
part1 = text[:6]
part2 = text[6:17]
part3 = text[17:]

new_text = part1 + " " + part2 + " " + part3
check = "Programming" in text

print(f"Extracted: {new_text}")
print(f"Substring 'Programming' found: {check}")
```

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```
Extracted: Python Programming Basics
Substring 'Programming' found: True
```

3. Write a program to accept city and state names, generate a short code using slicing and concatenation, search for a character in the city name, and print all information using string formatting.

Code:

```
city = input("Enter city name: ")
state = input("Enter state name: ")

code = city[:3] + state[:3]
char = input("Enter a character to search in city name: ")

print(f"City: {city}, State: {state}, Code: {code}")
print(f"Character '{char}' found in city: {char in city}")
```

Output:

```
Enter city name: Kolhapur
Enter state name: Maharashtra
Enter a character to search in city name: p
City: Kolhapur, State: Maharashtra, Code: KolMah
Character 'p' found in city: True
```

4. Develop a program that reads an email address, extracts the username before '@', concatenates it with a new domain, checks for digits in the username, and displays the formatted new email.

Code:

```
email = input("Enter your email: ")
username = email.split("@")[0]
new_email = username + "@example.com"
has_digit = any(ch.isdigit() for ch in username)

print(f"Old Email: {email}")
print(f"New Email: {new_email}")
print(f"Contains digits: {has_digit}")
```

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```
Enter your email: julie123@gmail.com
Old Email: julie123@gmail.com
New Email: julie123@example.com
Contains digits: True
```

5. Write a Python program that takes a word, reverses it using slicing, concatenates it with the original, searches for a matching character, and formats the output for display.

Code:

```
word = input("Enter a word: ")
reversed_word = word[::-1]
combined = word + reversed_word
char = input("Enter a character to search: ")
print(f"Original + Reversed: {combined}")
print(f"Character '{char}' found: {char in combined}")
```

Output:

```
Enter a word: Apple
Enter a character to search: z
Original + Reversed: AppleelppA
Character 'z' found: False
```

6. Write a program using the string "Knowledge is power" to extract specific words with slicing, join them to form a new sentence, search for a given word, and print the formatted sentence.

Code:

```
text = "Knowledge is power"
part1 = text[:9]
part2 = text[13:]
new_sentence = part1 + " gives " + part2
search_word = input("Enter a word to search: ")

print(f"New Sentence: {new_sentence}")
print(f"Word '{search_word}' found: {search_word in text}")
```

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```
Enter a word to search: Grapes
New Sentence: Knowledge gives power
Word 'Grapes' found: False
```

7. Write a Python program that accepts two words, extracts specific portions using slicing, concatenates them into a phrase, searches for "ing", and displays the result in a formatted manner.

Code:

```
w1 = input("Enter first word: ")
w2 = input("Enter second word: ")

phrase = w1[:3] + w2[-3:]
found = "ing" in (w1 + w2)

print(f"New Phrase: {phrase}")
print(f"'ing' found: {found}")
```

Output:

```
Enter first word: Dance
Enter second word: Buy
New Phrase: DanBuy
'ing' found: False
```

8. Write a program that accepts two sentences, extracts parts from both using slicing, combines them, searches for a common substring, and prints a formatted comparison message.

Code:

```
s1 = input("Enter first sentence: ")
s2 = input("Enter second sentence: ")

mix = s1[:5] + s2[-5:]
```

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```
common = input("Enter substring to search: ")

print(f"Combined: {mix}")
print(f"Common substring '{common}' found: {common in (s1 + s2)}")
```

Output:

```
Enter first sentence: Python is fun
Enter second sentence: I love programming
Enter substring to search: love
Combined: Pythomming
Common substring 'love' found: True
```

9. Write a Python program to accept a movie name and release year, create a short movie code using slicing and concatenation, check for a specific word in the movie name, and format the final output.

Code:

```
movie = input("Enter movie name: ")
year = input("Enter release year: ")

code = movie[:3].upper() + year[-2:]
word = input("Enter a word to search in movie name: ")

print(f"Movie: {movie} ({year})")
print(f"Movie Code: {code}")
print(f"Word '{word}' found: {word in movie}")
```

Output:

```
Enter movie name: Titanic
Enter release year: 1985
Enter a word to search in movie name: tit
Movie: Titanic (1985)
Movie Code: TIT85
Word 'tit' found: False
```

10. Write a Python program to generate a simple password by slicing and concatenating parts of a user's name and birth year, search for digits in it, and display the password using formatted output.

Code:

```
name = input("Enter your name: ")
```

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```
birth = input("Enter birth year: ")

password = name[:3] + birth[-3:]
has_digit = any(ch.isdigit() for ch in password)

print(f"Generated Password: {password}")
print(f"Contains digits: {has_digit}")
```

Output:

```
Enter your name: Rose
Enter birth year: 2000
Generated Password: Ros000
Contains digits: True
```

11. Write a program that accepts a college name and department, creates a department code using slicing and concatenation, searches for the word "Tech", and prints the formatted details.

Code:

```
college = input("Enter college name: ")
dept = input("Enter department name: ")

code = college[:3] + dept[:3]
found = "Tech" in dept

print(f"College: {college}, Department: {dept}, Code: {code}")
print(f"'Tech' found: {found}")
```

Output:

```
Enter college name: Sanjay Ghodawat University
Enter department name: CSE
College: Sanjay Ghodawat University, Department: CSE, Code: SanCSE
'Tech' found: False
```

12. Write a Python program that reads a product name and category, forms a label using sliced parts, searches for a specific substring, and prints the final label using string formatting.

Code:

```
product = input("Enter product name: ")
category = input("Enter category: ")
```

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```
label = product[:3] + category[:3]
search = input("Enter substring to search: ")

print(f"Product Label: {label}")
print(f"Substring '{search}' found: {search in product}")
```

Output:

```
Enter product name: T-shirt
Enter category: Cloths
Enter substring to search: shirt
Product Label: T-sClo
Substring 'shirt' found: True
```

13. Write a program to input a book title and author name, slice and join parts of both, search for a word in the title, and display the information in a single formatted string.

Code:

```
book = input("Enter book title: ")
author = input("Enter author name: ")

combined = book[:4] + author[:4]
word = input("Enter a word to search in title: ")

print(f"Book: {book}, Author: {author}, Code: {combined}")
print(f"Word '{word}' found in title: {word in book}")
```

Output:

```
Enter book title: Chaava
Enter author name: Shivaji Sawant
Enter a word to search in title: h
Book: Chaava, Author: Shivaji Sawant, Code: ChaaShiv
Word 'h' found in title: True
```

14. Write a Python program to create a social media username by slicing and concatenating parts of a user's name and year of birth, search for vowels in it, and display the formatted username.

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Code:

```
name = input("Enter your name: ")
year = input("Enter year of birth: ")

username = name[:4].lower() + year[-2:]
vowels = [v for v in username if v in 'aeiou']

print(f"Username: {username}")
print(f"Vowels found: {', '.join(vowels) if vowels else 'None'}")
```

Output:

```
Enter your name: Joey
Enter year of birth: 1985
Username: joey85
Vowels found: o, e
```

15. Write a program that accepts a company name, forms a domain name by slicing and concatenation, checks whether "AI" exists in the name, and prints the formatted domain details.

Code:

```
company = input("Enter company name: ")
domain = company[:4].lower() + ".com"
found = "AI" in company.upper()

print(f"Company: {company}")
print(f"Domain: {domain}")
print(f"'AI' found in name: {found}")
```

Output:

```
Enter company name: Google
Company: Google
Domain: goog.com
'AI' found in name: False
```