PRACTICUM REPORT

ALGORITHM AND DATA STRUCTURES

Quiz

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1.11 Questions

1. Question 1: Data Statistics in a List

   Given the daily sales data of a store over 10 days in the form of a list:

   sales = [105, 95, 130, 105, 160, 140, 115, 160, 115, 160]

   Your tasks:

   1. Calculate the average daily sales.

   2. Determine the day with the highest and lowest sales.

   3. Sort the sales data from lowest to highest.

   4. Create a function that takes a specific value and returns how many times that value appears in the list.

   5. Modify the list so that it only contains unique values (no duplicates).

Quizz > qs1.py > ...

```python
sales = [105, 95, 130, 105, 160, 140, 115, 160, 115, 160]

# Calculate the average of the sales
average = sum(sales) / len(sales)
print(f"Average daily sales : {average}")

# Determone the day with the highest sales and lowets sales
def highest_sales(sales):
    n = len(sales)
    day = 1
    tertinggi = sales[0]
    for i in range(1, n):
        if sales[i] > tertinggi:
            tertinggi = sales[i]
    return tertinggi
def lowest_sales(sales):
    n = len(sales)
    day = 1
    terkecil = sales[0]
    for i in range(1, n):
        if sales[i] < terkecil:
            terkecil = sales[i]
    return terkecil
print(f"highest values : {highest_sales(sales)} day {sales.index(highest_sales(sales))}")
print(f"lowets values : {lowest_sales(sales)} day {sales.index(lowest_sales(sales))}")

# Sort the sales data from lowets to highest
sales.sort()
print(f"sort data lowets to hignets : {sales}")

# Create a function that takes a specific value and returns how many times that values appears in the list
def count_kejadian(value, sales):
    count = 0
    for i in sales:
        if i == value:
            count += 1
    return count
print(count_kejadian(160, sales))
print(count_kejadian(105, sales))
print(count_kejadian(200, sales))

# Modify the list so that it only contains unique values(no duplicates)
```

```python
def unique_values(sales):
    unique = []
    for i in sales:
        if i not in unique:
            unique.append(i)
    return unique
print(unique_values(sales))

```

Picture 1.1 the code of qs1

```
PS D:\Semester 4\PrakAl_and_StrDat> & C:/Users/Acer/AppData/Local/Programs/Python/Python311/python.exe "d:/Semester 4/PrakAl_and_StrDat/Quizz/qs1.py"
Average daily sales : 128.5
highest values : 160 day 4
lowets values : 95 day 1
sort data lowets to hignets : [95, 105, 105, 115, 115, 130, 140, 160, 160, 160]
3
2
0
[95, 105, 115, 130, 140, 160]
```

Picture 1.2 the output.

2. Question 4: String Data Processing

   Given the following **sentence**:

   sentence = "Programming in Python is fun and beneficial."

   Your tasks:

   1. Count the number of words in the sentence.

   2. Find and count the number of vowel letters (a, e, i, o, u) in the sentence.

   3. Reverse the order of words in the sentence without using .split() and .reverse().

   4. Replace every vowel letter with the character * and print the result.

Quizz > qs2.py > ...

```python
sentence = "Programming in python is fun and beneficial."

# Count the number of words in the sentence
def count_words(sentence):
    count = sentence.split()
    return len(count)
print("Number of words in the sentence: ", count_words(sentence))

# Find and count the number of vowel letter (a, i, u, e, o) in the sentence
vowels = "aiueo"
vowel_count = 0
for i in sentence:
    if i in vowels:
        vowel_count += 1
print("Number of vowels in the sentence: ", vowel_count)

# Reserve the order of words in the sentence without using.split() and .reverse().
sentence = sentence + " "
word = ""
sentence_baru = ""
for i in sentence:
    if i != " ":
        word += i
    else:
        sentence_baru = word + " " + sentence_baru
        word = ""
print("Reversed sentence: ", sentence_baru)

# Replace every vowel letter with the character * and print the results
sentence_baru = ""
for i in sentence:
    if i.lower() in vowels:
        sentence_baru += "*"
    else:
        sentence_baru += i
print("New sentence: ", sentence_baru)
```

Picture 2.2 the code qs4

```
PS D:\Semester 4\PrakAl_and_StrDat> & C:/Users/Acer/AppData/Local/Programs/Python/Python311/python.exe "d:/Semester 4/PrakAl_and_StrDat/Quizz/qs2.py"
Number of words in the sentence:  7
Number of vowels in the sentence:  13
Reversed sentence:  beneficial. and fun is python in Programming
New sentence:  Pr*gr*mm*ng *n pyth*n *s f*n *nd b*n*f*c**l.
```

Picture 2.2 the output.