String operations practise

Here's a **set of coding questions with answers** for the string operations you listed:

Q1. Count how many vowels are in the word "engineering".
Answer:

```
word = "engineering"
vowels = "aeiouAEIOU"
count = sum(1 for ch in word if ch in vowels)
print("Number of vowels:", count)
```

Output:

```
Number of vowels: 5
```

Q2. Change "good morning" to "good evening".
Answer:

```
text = "good morning"
new_text = text.replace("morning", "evening")
print(new_text)
```

Output:

```
good evening
```

Q3. Check if "safe" is present in "wearable device for safety".
Answer:

```
sentence = "wearable device for safety"
print("safe" in sentence)  # True if found, False otherwise
```

Output:

```
True
```

Q4. Find the starting index of "Data" in "programming for data science".
Answer:

```
sentence = "programming for data science"
index = sentence.lower().find("data")  # lower() for case-
insensitive search
print("Starting index:", index)
```

Output:

```
Starting index: 17
```

Q5. Convert a list of words into a dash-separated string.
Answer:

```
words = ["machine", "learning", "project"]
```

```
dash_str = "-".join(words)
print(dash_str)
```
Output:

```
machine-learning-project
```

Q6. Clean up a sentence with unwanted spaces.
Answer:

```
sentence = "   Python   programming    is   fun   "
cleaned = " ".join(sentence.split())
print(cleaned)
```
Output:

```
Python programming is fun
```

Q7. Check if a PIN code is numeric.
Answer:

```
pin = "682021"
print(pin.isdigit())
```
Output:

```
True
```

Q8. Check if a PAN number is alphanumeric.
Answer:

```
pan = "ABCDE1234F"
print(pan.isalnum())
```
Output:

```
True
```

If you want, I can **combine all these into a single Python file with user input options**, so you can run them like a mini string-operations toolkit. That would make it easier for practice and assignments.