

```
1.import re

pattern = re.compile(r'^[a-zA-Z0-9]+$')

def check_string(s):

    return bool(pattern.match(s))
```

```
2. pattern = re.compile(r'ab*')
```

```
def check_string(s):

    return bool(pattern.match(s))
```

```
# Examples
```

```
print(check_string("a")) # True
print(check_string("abbb")) # True
print(check_string("ac")) # False
```

```
3. pattern = re.compile(r'ab+')
```

```
def check_string(s):

    return bool(pattern.match(s))
```

```
# Examples
```

```
print(check_string("ab")) # True
print(check_string("abbb")) # True
print(check_string("a")) # False
```

```
4. pattern = re.compile(r'ab?')
```

```
def check_string(s):

    return bool(pattern.match(s))
```

```
# Examples
```

```
print(check_string("a")) # True
print(check_string("ab")) # True
print(check_string("abb")) # False
```

```
5. pattern = re.compile(r'ab{3}')
```

```
def check_string(s):
    return bool(pattern.match(s))
```

```
# Examples
```

```
print(check_string("abbb")) # True
print(check_string("abbbb")) # False
print(check_string("ab")) # False
```

```
6. pattern = re.compile(r'ab{2,3}')
```

```
def check_string(s):
    return bool(pattern.match(s))
```

```
# Examples
```

```
print(check_string("abb")) # True
print(check_string("abbb")) # True
print(check_string("abbbb")) # False
```

```
7. pattern = re.compile(r'a.*b$')
```

```
def check_string(s):
    return bool(pattern.match(s))
```

```
# Examples
```

```
print(check_string("a123b")) # True
```

```
print(check_string("ab")) # True
print(check_string("a123")) # False
```

```
8. pattern = re.compile(r'^\w+')
```

```
def find_word(s):
    match = pattern.match(s)
    return match.group() if match else None
```

```
# Examples
```

```
print(find_word("hello world")) # hello
print(find_word("123 abc")) # 123
```

```
9. pattern = re.compile(r'\w+$')
```

```
def find_word(s):
    match = pattern.search(s)
    return match.group() if match else None
```

```
# Examples
```

```
print(find_word("hello world")) # world
print(find_word("123 abc")) # abc
```

```
10. pattern = re.compile(r'\b\d{4}\b')
```

```
def find_4digit_words(s):
    return pattern.findall(s)
```

```
# Example
```

```
text = "01 0132 231875 1458 301 2725."
print(find_4digit_words(text)) # ['0132', '1458', '2725']
```