validate0.py

```
# Validates email address by checking for @

email = input("What's your email? ").strip()

if "@" in email:
    print("Valid")
else:
    print("Invalid")
```

validate1.py

```
# Validates email address by checking for . too

email = input("What's your email? ").strip()

if "@" in email and "." in email:
    print("Valid")
else:
    print("Invalid")
```

validate2.py

```python
# Validates email address by checking username and domain separately

email = input("What's your email? ").strip()

username, domain = email.split("@")

if username and "." in domain:
    print("Valid")
else:
    print("Invalid")
```

validate3.py

```python
# Validates email address by checking whether domain ends with .edu

email = input("What's your email? ").strip()

username, domain = email.split("@")

if username and domain.endswith(".edu"):
    print("Valid")
else:
    print("Invalid")
```

validate4.py

```
# Validates email address by checking for @ with regex

import re

email = input("What's your email? ").strip()

if re.search("@", email):
    print("Valid")
else:
    print("Invalid")
```

validate5.py

```
# Adds .*

import re

email = input("What's your email? ").strip()

if re.search(".*@.*", email):
    print("Valid")
else:
    print("Invalid")
```

validate6.py

```
# Changes * to +

import re

email = input("What's your email? ").strip()

if re.search(".+@.+", email):
    print("Valid")
else:
    print("Invalid")
```

validate7.py

```
# Adds \.edu

import re

email = input("What's your email? ").strip()

if re.search(".+@.+\.edu", email):
    print("Valid")
else:
    print("Invalid")
```

validate8.py

```python
# Adds ^ and $ to regex

import re

email = input("What's your email? ").strip()

if re.search("^.+@.+\.edu$", email):
    print("Valid")
else:
    print("Invalid")
```

validate9.py

```python
# Adds character class

import re

email = input("What's your email? ").strip()

if re.search("^[a-zA-Z0-9_]+@[a-zA-Z0-9_]+\.edu$", email):
    print("Valid")
else:
    print("Invalid")
```

validate10.py

```python
# Replaces character class with \w

import re

email = input("What's your email? ").strip()

if re.search("^\w+@\w+\.edu$", email):
    print("Valid")
else:
    print("Invalid")
```

validate11.py

```python
# Adds re.IGNORECASE

import re

email = input("What's your email? ").strip()

if re.search("^\w+@\w+\.edu$", email, re.IGNORECASE):
    print("Valid")
else:
    print("Invalid")
```

validate12.py

```python
# Adds optional subdomain

import re

email = input("What's your email? ").strip()

if re.search("^\w+@(\w+\.)?\w+\.edu$", email, re.IGNORECASE):
    print("Valid")
else:
    print("Invalid")
```

format0.py

```
# Reformats "last, first" as "first last"

name = input("What's your name? ").strip()
if "," in name:
    last, first = name.split(", ")
    name = f"{first} {last}"
print(f"hello, {name}")
```

format1.py

```
# Uses re.search

import re

name = input("What's your name? ").strip()
matches = re.search("^(.+), (.+)$", name)
if matches:
    last, first = matches.groups()
    name = first + " " + last
print(f"hello, {name}")
```

format2.py

```
# Uses .group

import re

name = input("What's your name? ").strip()
matches = re.search("^(.+), (.+)$", name)
if matches:
    name = matches.group(2) + " " + matches.group(1)
print(f"hello, {name}")
```

format3.py

```
# Uses walrus operator

import re

name = input("What's your name? ").strip()
if matches := re.search("^(.+), (.+)$", name):
    name = matches.group(2) + " " + matches.group(1)
print(f"hello, {name}")
```

twitter0.py

```python
# Extracts Twitter username from URL using str.replace

url = input("URL: ").strip()

username = url.replace("https://twitter.com/", "")
print(f"Username: {username}")
```

twitter1.py

```python
# Extracts Twitter username from URL using str.removeprefix

url = input("URL: ").strip()

username = url.removeprefix("https://twitter.com/")
print(f"Username: {username}")
```

twitter2.py

```python
# Uses re.sub

import re

url = input("URL: ").strip()

username = re.sub("^https://twitter\.com/", "", url)
print(f"Username: {username}")
```

twitter3.py

```python
# Allows for http, no protocol, and www.

import re

url = input("URL: ").strip()

username = re.sub("^(https?://)?(www\.)?twitter\.com/", "", url)
print(f"Username: {username}")
```

twitter4.py

```
# Uses capture group

import re

url = input("URL: ").strip()

matches = re.search("^https?://(?:www\.)?twitter\.com/(.+)$", url, re.IGNORECASE)
if matches:
    print("Username:", matches.group(1))
```

twitter5.py

```
# Ignores query and fragment

import re

url = input("URL: ").strip()

matches = re.search("^https?://(?:www\.)?twitter\.com/([a-z0-9_]+)", url, re.IGNORECASE)
if matches:
    print("Username:", matches.group(1))
```