```python
1    class Point:
2        def __init__(self, x, y):
3            self.x = x
4            self.y = y
5
6    p = Point(3, 5)
7    print(p.x)
8    print(p.y)
9
```

```python
x = int(input())

if x > 0:
    print("x is positive")
elif x < 0:
    print("x is negative")
else:
    print("x is 0")
```

```python
def announce(f):
    def wrapper():
        print("About to run the function...")
        f()
        print("Done running the function.")
    return wrapper

@announce
def hello():
    print("Hello, world!")

hello()
```

```python
1    ages = {"Alice": 22, "Bob": 27}
2    ages["Charlie"] = 30
3    ages["Alice"] += 1
4
5    print(ages)
6
```

```python
1    def square(x):
2        return x * x
3
4    for i in range(10):
5        print("{} squared is {}".format(i, square(i)))
6
```

```python
1    print("Hello, world!")
2
```

```
1    for i in range(5):
2        print(i)
3
```

```
1    names = ["Alice", "Bob", "Charlie"]
2    for name in names:
3        print(name)
4
```

```
1    from functions import square
2
3    print(square(10))
4
```

```
1    name = input()
2    print(f"hello, {name}!")
3
```

```
1    name = "Alice"
2    coordinates = (10.0, 20.0)
3    names = ["Alice", "Bob", "Charlie"]
4
```

```
1    s = set()
2    s.add(1)
3    s.add(3)
4    s.add(5)
5    s.add(3)
6    print(s)
7
```

```python
1    i = 28
2    print(f"i is {i}")
3
4    f = 2.8
5    print(f"f is {f}")
6
7    b = True
8    print(f"b is {b}")
9
10   n = None
11   print(f"n is {n}")
12
```

```python
1    import random
2
3    from flask import Flask, render_template
4
5    app = Flask(__name__)
6
7    @app.route("/")
8    def index():
9        headline = random.choice(["Hello, world!", "Hi there!", "Good morning!"])
10       return render_template("index.html", headline=headline)
11
```

```
 1    <!DOCTYPE html>
 2    <html>
 3        <head>
 4            <title>My Website!</title>
 5        </head>
 6        <body>
 7            <h1>{{ headline }}</h1>
 8        </body>
 9    </html>
10
```

```python
1    from flask import Flask, render_template
2
3    app = Flask(__name__)
4
5    @app.route("/")
6    def index():
7        headline = "Hello, world!"
8        return render_template("index.html", headline=headline)
9
```

```
1    <!DOCTYPE html>
2    <html>
3        <head>
4            <title>My Website!</title>
5        </head>
6        <body>
7            <h1>{{ headline }}</h1>
8        </body>
9    </html>
10
```

```python
from flask import Flask, render_template

app = Flask(__name__)

@app.route("/")
def index():
    return render_template("index.html")

@app.route("/more")
def more():
    return render_template("more.html")

```

```
 1    <!DOCTYPE html>
 2    <html>
 3        <head>
 4            <title>My Website!</title>
 5        </head>
 6        <body>
 7            <h1>Second Page</h1>
 8
 9            <p>
10                Donec lobortis dapibus magna, quis facilisis velit malesuada a. Nunc
                  iaculis augue nulla, sed sodales dui volutpat lacinia. Vestibulum ante
                  ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae;
                  Nullam non lorem eget augue auctor feugiat at ut justo. Pellentesque
                  habitant morbi tristique senectus et netus et malesuada fames ac turpis
                  egestas. Aenean nec lectus eget diam tempor aliquam sit amet sed augue.
11            </p>
12
13            <a href="{{ url_for('index') }}">Go back</a>
14        </body>
15    </html>
16
```

```
 1    <!DOCTYPE html>
 2    <html>
 3        <head>
 4            <title>My Website!</title>
 5        </head>
 6        <body>
 7            <h1>Second Page</h1>
 8
 9            <p>
10                Donec lobortis dapibus magna, quis facilisis velit malesuada a. Nunc
```

```
1    <!DOCTYPE html>
2    <html>
3        <head>
4            <title>My Website!</title>
5        </head>
6        <body>
7            <h1>First Page</h1>
8
9            <p>
10               Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce placerat
                 rutrum nisi at pellentesque. Fusce orci magna, pulvinar ut ultricies id,
                 feugiat eu elit. Nam molestie eu lacus eu fermentum. Fusce eleifend
                 tempus sapien eu maximus. Donec lobortis dapibus magna, quis facilisis
                 velit malesuada a. Nunc iaculis augue nulla, sed sodales dui volutpat
                 lacinia.
11           </p>
12
13           <a href="{{ url_for('more') }}">See more...</a>
14       </body>
15   </html>
16
```

```
1    from flask import Flask, render_template
2
3    app = Flask(__name__)
4
5    @app.route("/")
6    def index():
7        return render_template("index.html")
8
```

```
 1   <!DOCTYPE html>
 2   <html>
 3       <head>
 4           <title>My Website!</title>
 5       </head>
 6       <body>
 7           Hello, world!
 8       </body>
 9   </html>
10
```

```python
1    from flask import Flask, render_template
2
3    app = Flask(__name__)
4
5    @app.route("/")
6    def index():
7        return render_template("index.html")
8
9    @app.route("/more")
10   def more():
11       return render_template("more.html")
12
```

```
 1    {% extends "layout.html" %}
 2
 3    {% block heading %}
 4        First Page
 5    {% endblock %}
 6
 7    {% block body %}
 8        <p>
 9            Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce placerat
               rutrum nisi at pellentesque. Fusce orci magna, pulvinar ut ultricies id,
               feugiat eu elit. Nam molestie eu lacus eu fermentum. Fusce eleifend tempus
               sapien eu maximus. Donec lobortis dapibus magna, quis facilisis velit
               malesuada a. Nunc iaculis augue nulla, sed sodales dui volutpat lacinia.
10        </p>
11
12        <a href="{{ url_for('more') }}">See more...</a>
13    {% endblock %}
14
```

```
 1   <!DOCTYPE html>
 2   <html>
 3       <head>
 4           <title>My Website!</title>
 5           <link rel="stylesheet" href="{{ url_for('static', filename='styles.css') }}">
 6       </head>
 7       <body>
 8           <h1>{% block heading %}{% endblock %}</h1>
 9
10           {% block body %}
11           {% endblock %}
12       </body>
13   </html>
14
```

```
1   {% extends "layout.html" %}
2
3   {% block heading %}
4       Second Page
5   {% endblock %}
6
7   {% block body %}
8       <p>
9           Donec lobortis dapibus magna, quis facilisis velit malesuada a. Nunc iaculis
            augue nulla, sed sodales dui volutpat lacinia. Vestibulum ante ipsum primis
            in faucibus orci luctus et ultrices posuere cubilia Curae; Nullam non lorem
            eget augue auctor feugiat at ut justo. Pellentesque habitant morbi tristique
            senectus et netus et malesuada fames ac turpis egestas. Aenean nec lectus
            eget diam tempor aliquam sit amet sed augue.
10      </p>
11
12      <a href="{{ url_for('index') }}">Go back</a>
13  {% endblock %}
14
```

```css
1   h1 {
2       color: red;
3   }
4
5   p {
6       font-family: sans-serif;
7       font-size: 18px;
8   }
9
```

```python
1   from flask import Flask
2
3   app = Flask(__name__)
4
5   @app.route("/")
6   def index():
7       return "Hello, world!"
8
9   @app.route("/<string:name>")
10  def hello(name):
11      return "Hello, {}!".format(name)
12
```

```python
from flask import Flask

app = Flask(__name__)

@app.route("/")
def index():
    return "Hello, world!"

@app.route("/david")
def david():
    return "Hello, David!"
```

```python
from flask import Flask, render_template, request, session
from flask_session import Session

app = Flask(__name__)

app.config["SESSION_PERMANENT"] = False
app.config["SESSION_TYPE"] = "filesystem"
Session(app)

notes = []

@app.route("/", methods=["GET", "POST"])
def index():
    if request.method == "POST":
        note = request.form.get("note")
        notes.append(note)

    return render_template("index.html", notes=notes)
```

```
 1   {% extends "layout.html" %}
 2
 3   {% block heading %}
 4       Notes
 5   {% endblock %}
 6
 7   {% block body %}
 8
 9       <ul>
10           {% for note in notes %}
11               <li>{{ note }}</li>
12           {% endfor %}
13       </ul>
14
15       <form action="{{ url_for('index') }}" method="post">
16           <input type="text" name="note" placeholder="Enter Note Here">
17           <button>Add Note</button>
18       </form>
19   {% endblock %}
20
```

```html
1   <!DOCTYPE html>
2   <html>
3       <head>
4           <title>My Website!</title>
5           <link rel="stylesheet" href="{{ url_for('static', filename='styles.css') }}">
6       </head>
7       <body>
8           <h1>{% block heading %}{% endblock %}</h1>
9
10          {% block body %}
11          {% endblock %}
12      </body>
13  </html>
14
```

```
1    {% extends "layout.html" %}
2
3    {% block heading %}
4        Second Page
5    {% endblock %}
6
7    {% block body %}
8        <p>
9            Donec lobortis dapibus magna, quis facilisis velit malesuada a. Nunc iaculis
             augue nulla, sed sodales dui volutpat lacinia. Vestibulum ante ipsum primis
             in faucibus orci luctus et ultrices posuere cubilia Curae; Nullam non lorem
             eget augue auctor feugiat at ut justo. Pellentesque habitant morbi tristique
             senectus et netus et malesuada fames ac turpis egestas. Aenean nec lectus
             eget diam tempor aliquam sit amet sed augue.
10       </p>
11
12       <a href="{{ url_for('index') }}">Go back</a>
13   {% endblock %}
14
```

```css
1   h1 {
2       color: red;
3   }
4
5   p {
6       font-family: sans-serif;
7       font-size: 18px;
8   }
9
```

```python
from flask import Flask, render_template, request, session
from flask_session import Session

app = Flask(__name__)

app.config["SESSION_PERMANENT"] = False
app.config["SESSION_TYPE"] = "filesystem"
Session(app)

notes = []

@app.route("/", methods=["GET", "POST"])
def index():
    if request.method == "POST":
        note = request.form.get("note")
        notes.append(note)

    return render_template("index.html", notes=notes)
```

```
 1    {% extends "layout.html" %}
 2
 3    {% macro error(message) %}
 4        <div class="error">
 5            {{ message }}
 6        </div>
 7    {% endmacro %}
 8
 9    {% block body %}
10
11        {{ error("There was a problem.") }}
12
13        {{ error("There was another problem.") }}
14
15    {% endblock %}
16
```

```html
1    <!DOCTYPE html>
2    <html>
3        <head>
4            <title>My Website!</title>
5            <link rel="stylesheet" href="{{ url_for('static', filename='styles.css') }}">
6        </head>
7        <body>
8            {% block body %}
9            {% endblock %}
10       </body>
11   </html>
12
```

```html
1    <!DOCTYPE html>
2    <html>
3        <head>
4            <title>My Website!</title>
5            <link rel="stylesheet" href="{{ url_for('static', filename='styles.css') }}">
6        </head>
7        <body>
8            {% block body %}
9            {% endblock %}
```

```css
1    .error {
2        border: 2px solid black;
3        font-size: 18px;
4        font-weight: bold;
5        margin: 10px;
6        padding: 10px;
7        color: red;
8    }
9
```

```python
1    from flask import Flask, render_template
2
3    app = Flask(__name__)
4
5    @app.route("/")
6    def index():
7        names = ["Alice", "Bob", "Charlie"]
8        return render_template("index.html", names=names)
9
```

```
 1  <!DOCTYPE html>
 2  <html>
 3      <head>
 4          <title>My Website!</title>
 5      </head>
 6      <body>
 7          <h1>Names</h1>
 8
 9          <ul>
10              {% for name in names %}
11                  <li>{{ name }}</li>
12              {% endfor %}
13          </ul>
14      </body>
15  </html>
16
```

```python
from flask import Flask, render_template

app = Flask(__name__)

@app.route("/")
def index():
    return render_template("index.html")

@app.route("/more")
def more():
    return render_template("more.html")

```

```
 1   {% extends "layout.html" %}
 2
 3   {% block heading %}
 4       Second Page
 5   {% endblock %}
 6
 7   {% block body %}
 8       <p>
 9           Donec lobortis dapibus magna, quis facilisis velit malesuada a. Nunc iaculis
               augue nulla, sed sodales dui volutpat lacinia. Vestibulum ante ipsum primis
               in faucibus orci luctus et ultrices posuere cubilia Curae; Nullam non lorem
               eget augue auctor feugiat at ut justo. Pellentesque habitant morbi tristique
               senectus et netus et malesuada fames ac turpis egestas. Aenean nec lectus
               eget diam tempor aliquam sit amet sed augue.
10       </p>
11
12       <a href="{{ url_for('index') }}">Go back</a>
13   {% endblock %}
14
```

```
1   <!DOCTYPE html>
2   <html>
3       <head>
4           <title>My Website!</title>
5       </head>
6       <body>
7           <h1>{% block heading %}{% endblock %}</h1>
8
9           {% block body %}
10          {% endblock %}
11      </body>
12  </html>
13
```

```
 1    {% extends "layout.html" %}
 2
 3    {% block heading %}
 4        First Page
 5    {% endblock %}
 6
 7    {% block body %}
 8        <p>
 9            Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce placerat
               rutrum nisi at pellentesque. Fusce orci magna, pulvinar ut ultricies id,
               feugiat eu elit. Nam molestie eu lacus eu fermentum. Fusce eleifend tempus
               sapien eu maximus. Donec lobortis dapibus magna, quis facilisis velit
               malesuada a. Nunc iaculis augue nulla, sed sodales dui volutpat lacinia.
10        </p>
11
12        <a href="{{ url_for('more') }}">See more...</a>
13    {% endblock %}
14
```

```python
 1    from flask import Flask, render_template, request
 2
 3    app = Flask(__name__)
 4
 5    @app.route("/")
 6    def index():
 7        return render_template("index.html")
 8
 9    @app.route("/hello", methods=["POST"])
10    def hello():
11        name = request.form.get("name")
12        return render_template("hello.html", name=name)
13
```

```
 1   <!DOCTYPE html>
 2   <html>
 3       <head>
 4           <title>My Website!</title>
 5       </head>
 6       <body>
 7           <h1>{% block heading %}{% endblock %}</h1>
 8
 9           {% block body %}
10           {% endblock %}
11       </body>
12   </html>
13
```

```
1    {% extends "layout.html" %}
2
3    {% block heading %}
4        First Page
5    {% endblock %}
6
7    {% block body %}
8        <form action="{{ url_for('hello') }}" method="post">
9            <input type="text" name="name" placeholder="Enter Your Name">
10           <button>Submit</button>
11       </form>
12   {% endblock %}
13
```

```
 1    {% extends "layout.html" %}
 2
 3    {% block heading %}
 4        Hello!
 5    {% endblock %}
 6
 7    {% block body %}
 8        Hello, {{ name }}!
 9    {% endblock %}
10
```

```python
1    from flask import Flask
2
3    app = Flask(__name__)
4
5    @app.route("/")
6    def index():
7        return "Hello, world!"
8
```

```python
import datetime

from flask import Flask, render_template

app = Flask(__name__)

@app.route("/")
def index():
    now = datetime.datetime.now()
    new_year = now.month == 1 and now.day == 1
    return render_template("index.html", new_year=new_year)
```

```html
1    <!DOCTYPE html>
2    <html>
3        <head>
4            <title>Is it New Year?</title>
5            <style>
6                body {
7                    text-align: center;
8                }
9            </style>
10       </head>
11       <body>
12           {% if new_year %}
13               <h1>Yes! Happy New Year!</h1>
14           {% else %}
15               <h1>NO</h1>
16           {% endif %}
17       </body>
18   </html>
19
```