HW-BDD
網路計算機
(Web Calculator)
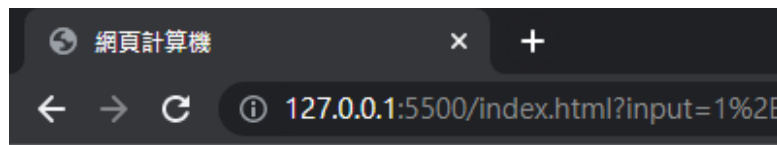

班級:資工三乙

學號:4a8g0052

姓名:林嘉彥

主畫面
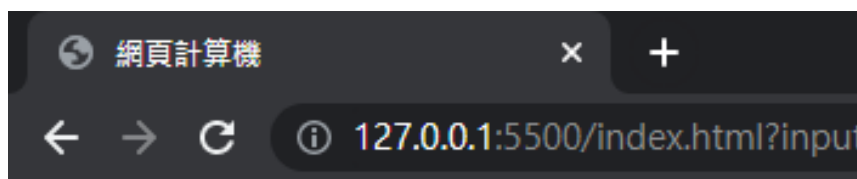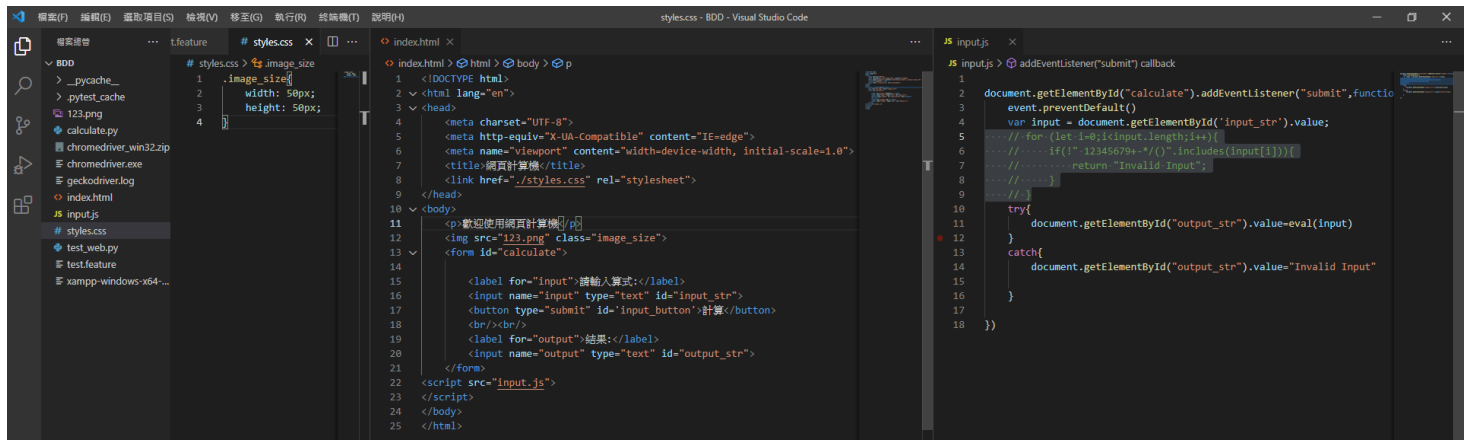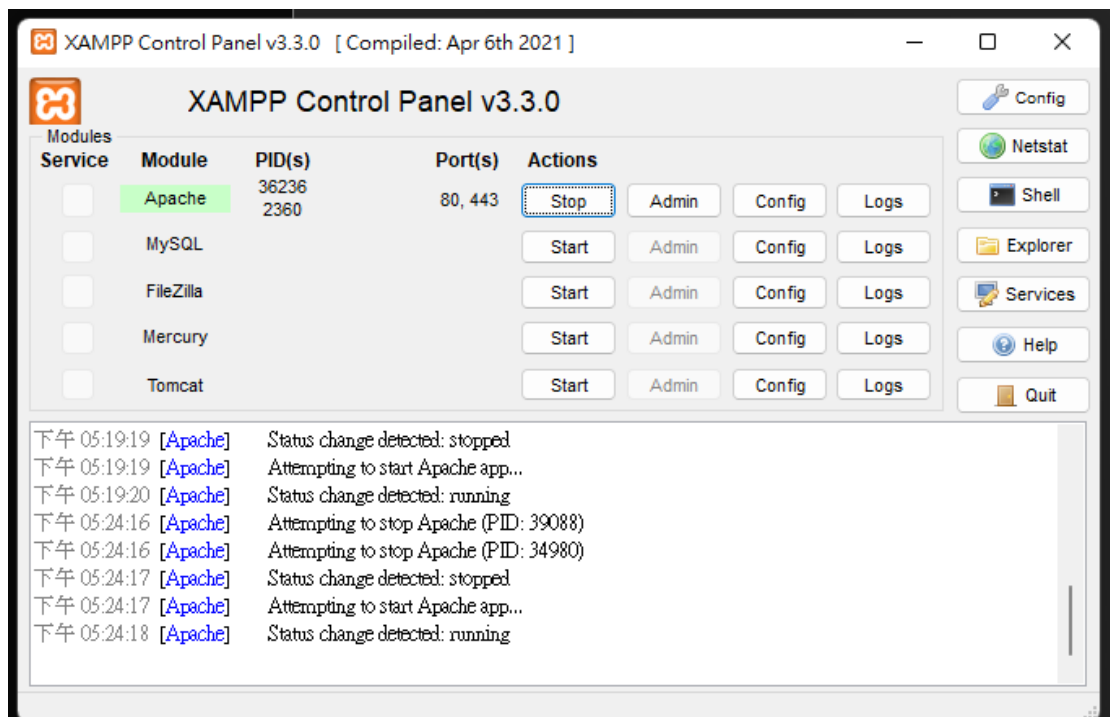

可輸入需計算算式，並按下"計算"按鈕
可在結果中看出答案

網站設計方式

使用 HTML,CSS, JavaScript 設計畫面與計算功能

利用 XAMPP 建立伺服器

XAMPP 是一個把 Apache 網頁伺服器與 PHP、Perl 及

MariaDB 集合在一起的安裝包，允許使用者可以在自

己的電腦上輕易的建立網頁伺服器。

行為驅動開發

```
4      I want to find information online,
5      So I can learn new things and get tasks done.
6
7      # Web scenarios can be highly declarative, which focuses on behavior.
8      # Don't get caught up in button names and layouts at the Gherkin level.
9      # Note that these scenarios use Selenium WebDriver to do browser interactio
10
11     Background:
12       Given the Calculator_web page is displayed
13
14     Scenario Outline: do simple operations
15       Given I enter <expression>
16       When I press "=" button
17       Then I get the answer <answer>
18       Examples:
19         | expression   | answer        |
20         | 3 + 2        | 5             |
21         | 3 - 2        | 1             |
22         | 3 * 2        | 6             |
23         | 3 / 2        | 1.5           |
24         | 3 +-*/ 2     | Invalid Input |
25         | hello world  | Invalid Input |
26     Scenario Outline: satisfy commutative property
27       Given I enter <expression1>
28       When I press "=" button
29       Then I get the same answer <expression2>
30       Examples:
31         | expression1 | expression2 |
32         | 3 + 4       | 4 + 3       |
33         | 2 * 5       | 5 * 2       |
34     Scenario Outline: satisfy associative property
35       Given I enter <expression1>
36       When I press "=" button
37       Then I get the same answer <expression2>
38       Examples:
39         | expression1 | expression2 |
40         | (2 + 3) + 4 | 2 + (3 + 4) |
41         | 2 * (3 * 4) | (2 * 3) * 4 |
42     Scenario Outline: satisfy distributive property
43       Given I enter <expression1>
44       When I press "=" button
45       Then I get the same answer <expression2>
46       Examples:
47         | expression1 | expression2   |
48         | 2 * (1 + 3) | (2*1) + (2*3) |
49         | (1 + 3) * 2 | (1*2) + (3*2) |
```

撰寫測資: 12 種算式包含加法/乘法交換律, 加法/乘法結合律, 加法/乘法結合律

測試程式

```python
test_web.py > ...
 1  import pytest
 2  import calculate
 3  from pytest_bdd import scenarios, given, when, then, parsers
 4  from selenium import webdriver
 5  from selenium.webdriver.common.by import By
 6
 7  Calculator_web = 'http://localhost/test'
 8
 9  scenarios('./test.feature')
10
11  @pytest.fixture
12  def browser():
13      b = webdriver.Chrome()
14      b.implicitly_wait(10)
15      yield b
16      b.quit()
17
18  @given('the Calculator_web page is displayed')
19  def ddg_home(browser):
20      browser.get(Calculator_web)
21
22  @given(parsers.parse('I enter {expression}'))
23  def step_impl(browser, expression):
24      input=browser.find_element(By.ID,'input_str')
25      input.send_keys(expression)
26
27  @when(parsers.parse('I press "=" button'))
28  def search_phrase(browser):
29      browser.find_element(By.ID,'input_button').click()
30  # Then Steps
31  @then(parsers.parse('I get the answer {answer}'))
32  def results_have_one(browser, answer):
33    reslt=browser.find_element(By.ID,'output_str').get_attribute("value")
34    assert reslt == answer
35
36
37  @then(parsers.parse('I get the same answer {expression2}'))
38  def results_have_one(browser, expression2):
39    reslt=browser.find_element(By.ID,'output_str').get_attribute("value")
40    assert int(reslt) == calculate.calculater(expression2)
41
```

測試結果

```
plugins: bdd-5.0.0
collected 12 items

test_web.py
DevTools listening on ws://127.0.0.1:64133/devtools/browser/f2293605-592b-4268-ba7b-db5694ca6890
.
DevTools listening on ws://127.0.0.1:64155/devtools/browser/cfa4c184-e91c-41f6-9c09-e1f382b99220
.
DevTools listening on ws://127.0.0.1:64180/devtools/browser/290f204e-d863-4c91-9998-62132b631f31
.
DevTools listening on ws://127.0.0.1:64199/devtools/browser/e46bdfb7-9f23-4bf2-927a-1aea9ae7c63a
.
DevTools listening on ws://127.0.0.1:64227/devtools/browser/32a4212a-ae9c-4800-b11a-dd782b4ea6e0
.
DevTools listening on ws://127.0.0.1:64281/devtools/browser/9b3ea8ad-56bb-4fae-8ab6-4a7dc57b2eeb
.
DevTools listening on ws://127.0.0.1:64303/devtools/browser/081218f2-96d5-4690-8a30-fb18e2d55cae
.
DevTools listening on ws://127.0.0.1:64323/devtools/browser/2034440a-8967-4a12-bf77-5528ecd600a2
.
DevTools listening on ws://127.0.0.1:64344/devtools/browser/fac53b77-21b4-4396-bd42-857c71a684ab
.
DevTools listening on ws://127.0.0.1:64364/devtools/browser/eb44d330-6c76-465e-a858-bbb61c87121a
.
DevTools listening on ws://127.0.0.1:64393/devtools/browser/88436a1b-7ed7-42ab-9fa3-bd59ecf45736
.
DevTools listening on ws://127.0.0.1:64413/devtools/browser/5045d98a-b736-466d-a9b4-f6cd661a2dde
.
=================================================================== warnings summary ====================
..\..\..\..\programdata\anaconda3\lib\site-packages\pytest_bdd\plugin.py:95
  c:\programdata\anaconda3\lib\site-packages\pytest_bdd\plugin.py:95: PytestUnknownMarkWarning: Unknown pytest.mark.google - is this a typo?  You c
st.org/en/stable/how-to/mark.html
    mark = getattr(pytest.mark, tag)

..\..\..\..\programdata\anaconda3\lib\site-packages\pytest_bdd\plugin.py:95
  c:\programdata\anaconda3\lib\site-packages\pytest_bdd\plugin.py:95: PytestUnknownMarkWarning: Unknown pytest.mark.web - is this a typo?  You can
org/en/stable/how-to/mark.html
    mark = getattr(pytest.mark, tag)

-- Docs: https://docs.pytest.org/en/stable/how-to/capture-warnings.html
================================================================ 12 passed, 2 warnings in 42.31s ========
PS C:\Users\a0907\Desktop\BDD>
```