SDEV 300 - Project 1

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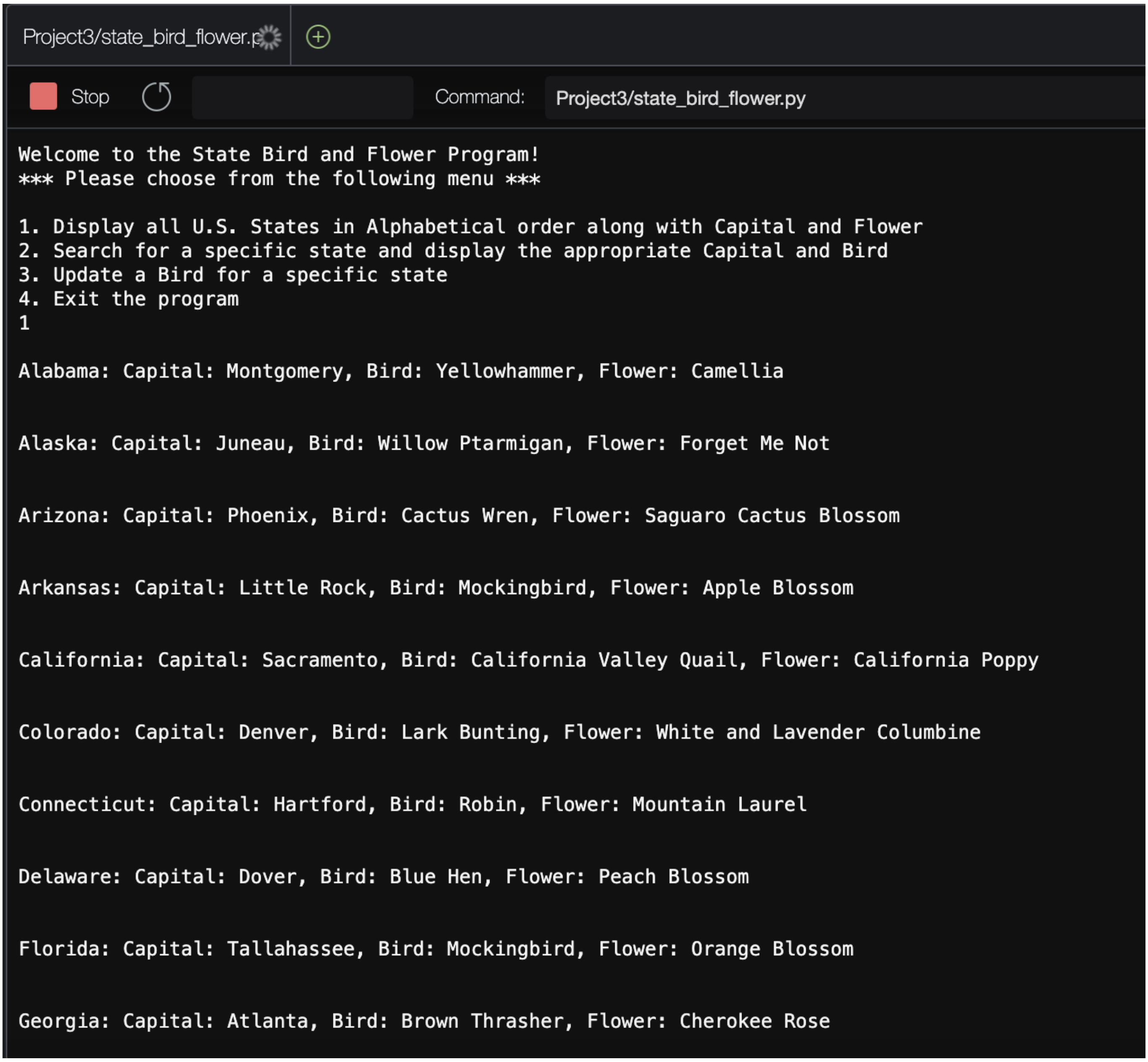
This post will serve as documentation for the project 3. Includes test cases and screenshots for the state bird/flower project and the squared/cubed set program.

State Bird Flower program

Test Case	Input	Expected Output	Actual Output	Pass?
1a	1	List of states info	List of states info (please see screenshot below)	Yes
1b	2, Virginia	Virginia's state info	Virginia: Capital: Richmond, Bird: Cardinal, Flower: Dogwood	Yes
1c	2, hawaii	Hawaii's state info	Hawaii: Capital: Honolulu, Bird: Nene, Flower: Hibiscus	Yes
1d	2, 1	error	Not found!	Yes
1e	3, ohio, a birb	Confirmation of bird updated	*** New Bird updated *** Ohio: Capital: Columbus, Bird: a birb, Flower: Scarlet Carnation	Yes
1f	1	List states with updated Ohio bird	List of states info (please see screenshot below)	Yes
1g	4	Exit program	*** Thank you for using the State Bird and Flower Program! ***	Yes
1h	a	error	please use Integer for menu selection. Not a valid response!	Yes

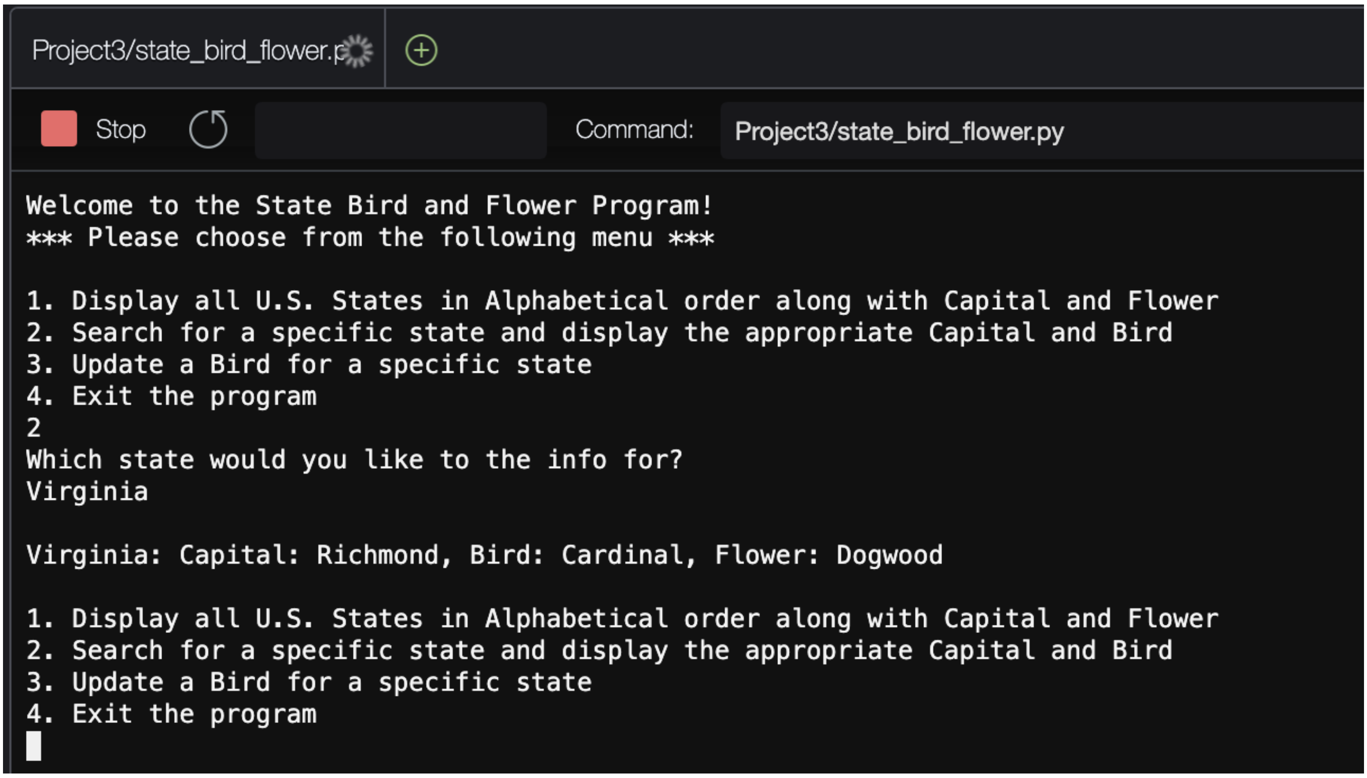
Test Case 1a



```
Welcome to the State Bird and Flower Program!
*** Please choose from the following menu ***

1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
1

Alabama: Capital: Montgomery, Bird: Yellowhammer, Flower: Camellia


Alaska: Capital: Juneau, Bird: Willow Ptarmigan, Flower: Forget Me Not


Arizona: Capital: Phoenix, Bird: Cactus Wren, Flower: Saguaro Cactus Blossom


Arkansas: Capital: Little Rock, Bird: Mockingbird, Flower: Apple Blossom


California: Capital: Sacramento, Bird: California Valley Quail, Flower: California Poppy


Colorado: Capital: Denver, Bird: Lark Bunting, Flower: White and Lavender Columbine


Connecticut: Capital: Hartford, Bird: Robin, Flower: Mountain Laurel


Delaware: Capital: Dover, Bird: Blue Hen, Flower: Peach Blossom


Florida: Capital: Tallahassee, Bird: Mockingbird, Flower: Orange Blossom


Georgia: Capital: Atlanta, Bird: Brown Thrasher, Flower: Cherokee Rose
```

Output in Cloud9 IDE of test case 1a (showing list of state info)

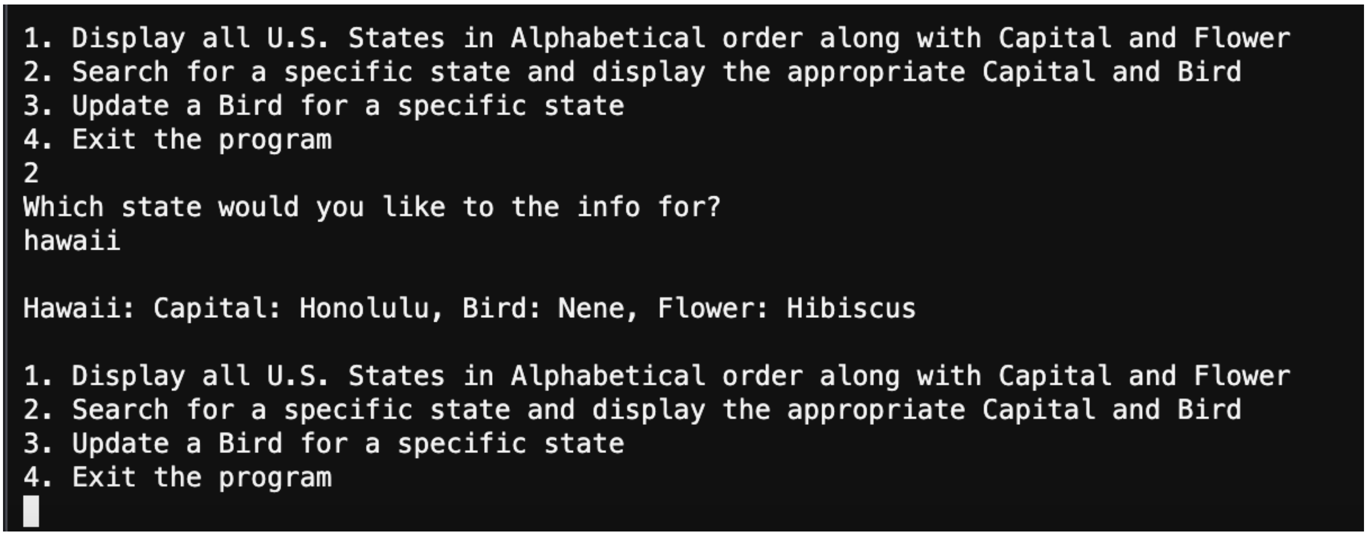
Test Case 1b



```
Welcome to the State Bird and Flower Program!
*** Please choose from the following menu ***

1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
2
Which state would you like to the info for?
Virginia

Virginia: Capital: Richmond, Bird: Cardinal, Flower: Dogwood

1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
```

Output in Cloud9 IDE of test case 1b (Showing state with sentence case input)

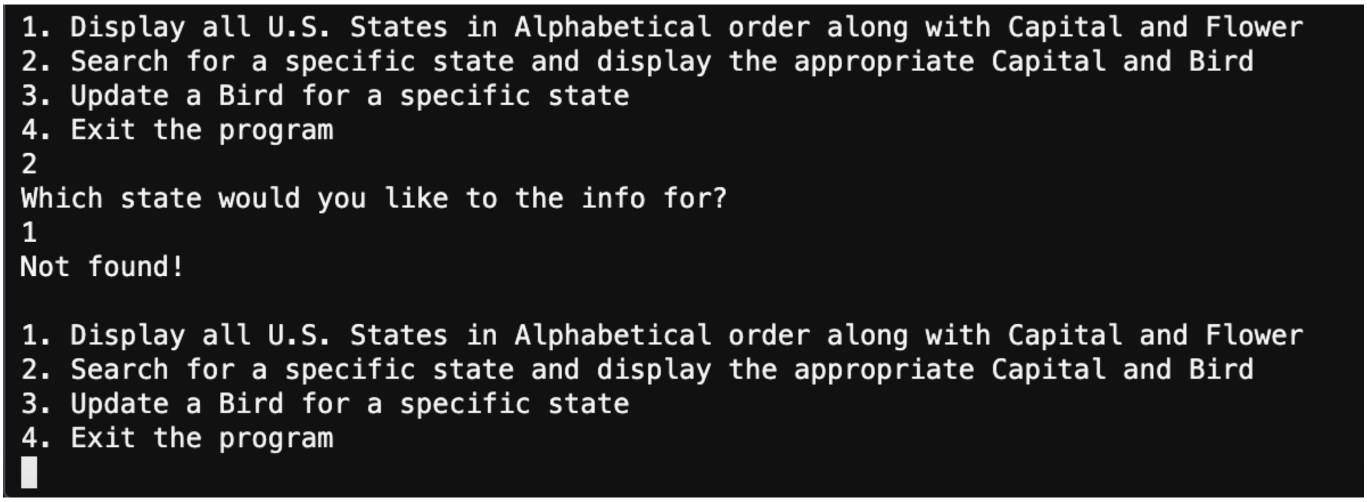
Test Case 1c



```
1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
2
Which state would you like to the info for?
hawaii

Hawaii: Capital: Honolulu, Bird: Nene, Flower: Hibiscus

1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
```

Output in Cloud9 IDE of test case 1c (Showing state with lower case input)

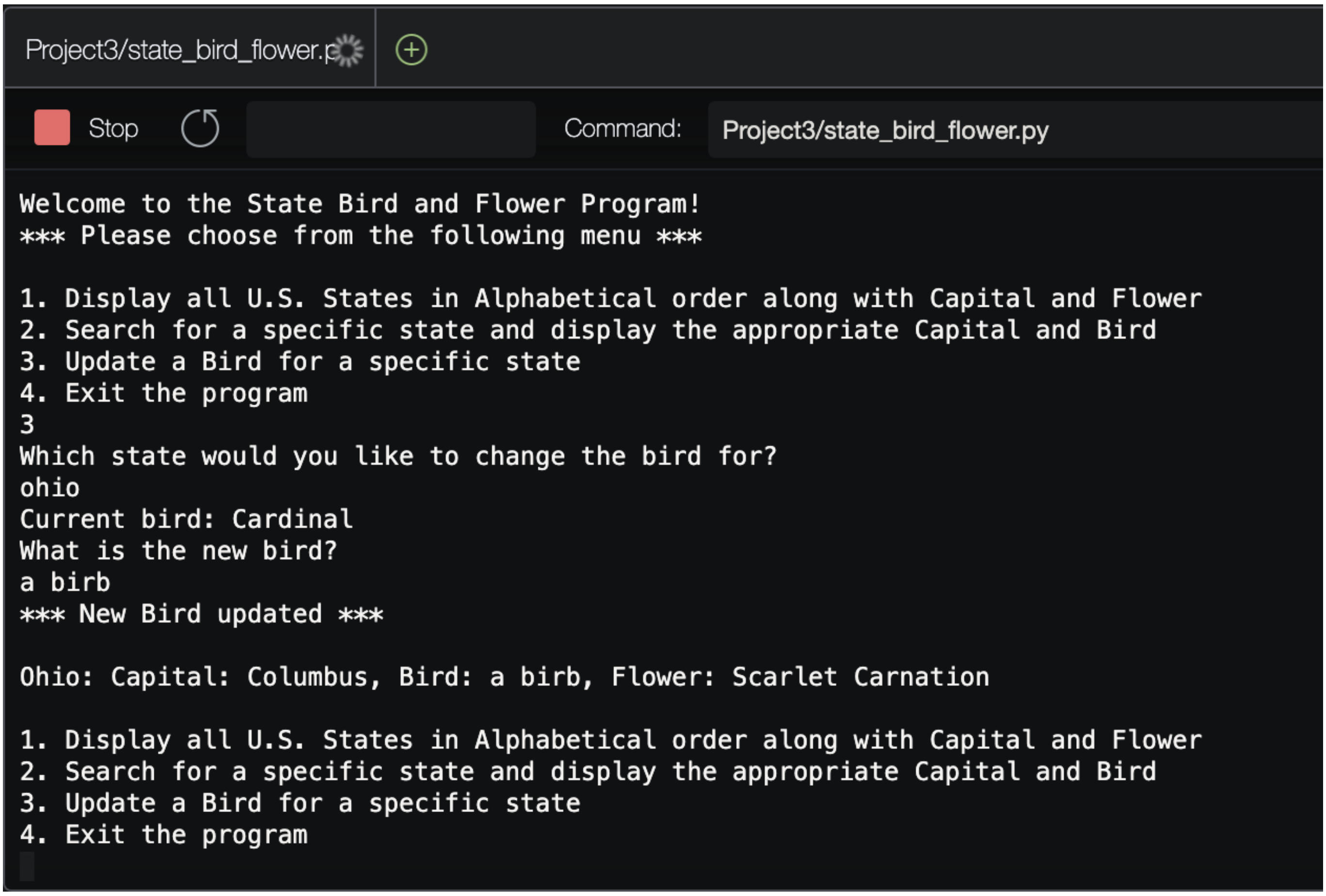
Test Case 1d



```
1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
2
Which state would you like to the info for?
1
Not found!

1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
```

Output in Cloud9 IDE of test case 1d (error with input)

Test Case 1e

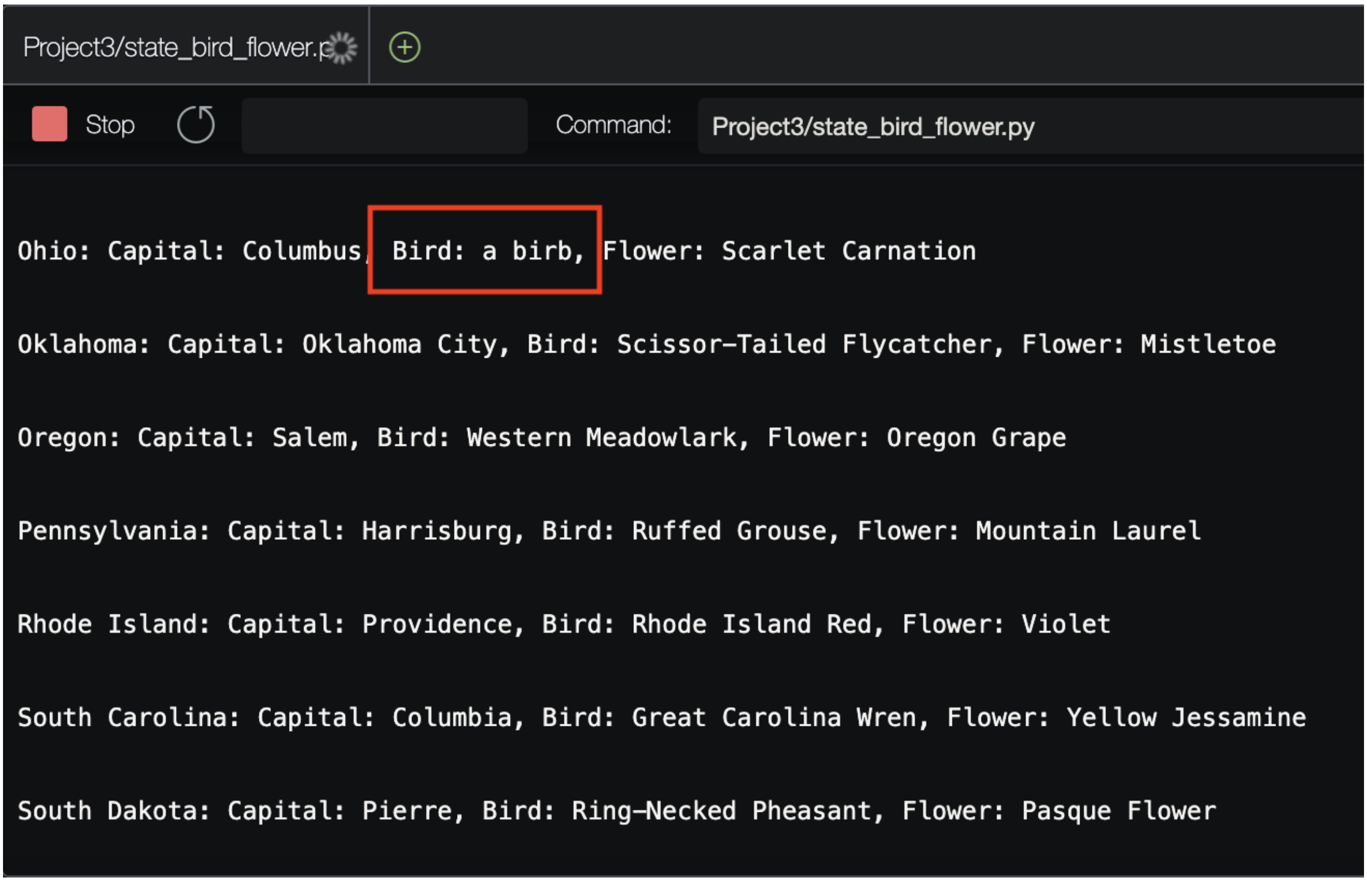


Project3/state_bird_flower.py

```
Welcome to the State Bird and Flower Program!
*** Please choose from the following menu ***

1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
3
Which state would you like to change the bird for?
ohio
Current bird: Cardinal
What is the new bird?
a birb
*** New Bird updated ***

Ohio: Capital: Columbus, Bird: a birb, Flower: Scarlet Carnation

1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
```

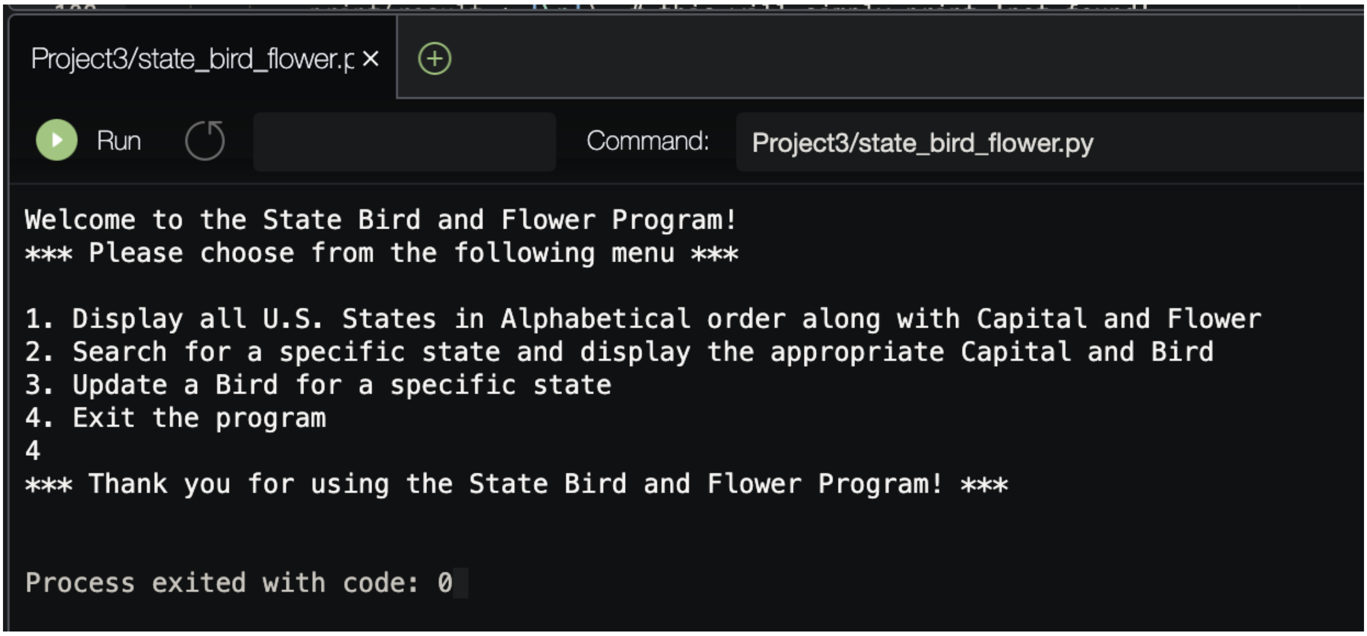
Output in Cloud9 IDE of test case 1e (updating bird)

Test Case 1f



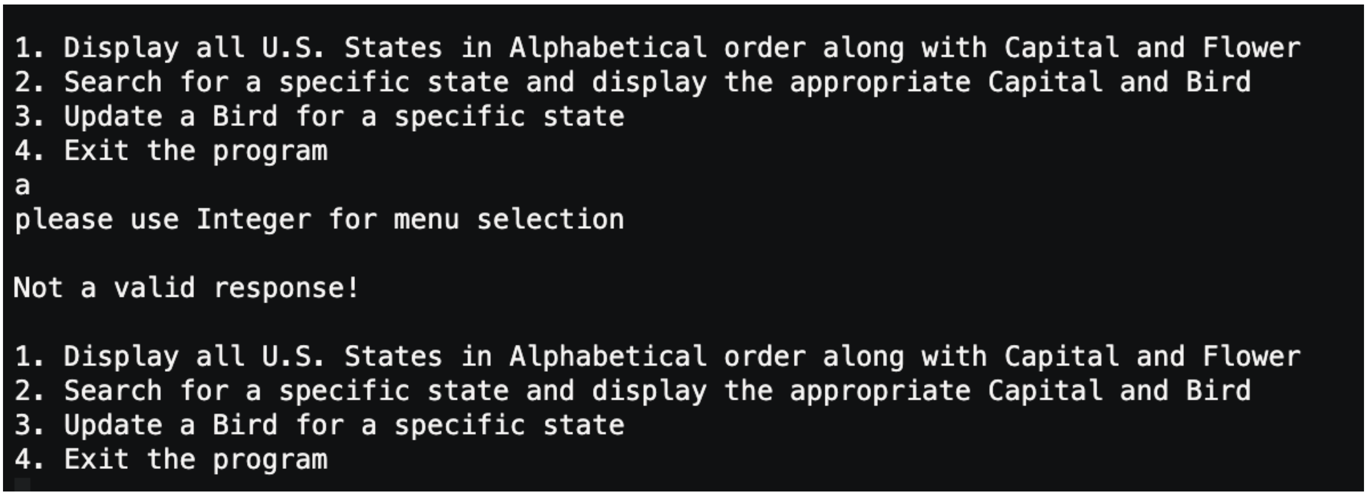
```
Ohio: Capital: Columbus, Bird: a birb, Flower: Scarlet Carnation

Oklahoma: Capital: Oklahoma City, Bird: Scissor-Tailed Flycatcher, Flower: Mistletoe

Oregon: Capital: Salem, Bird: Western Meadowlark, Flower: Oregon Grape

Pennsylvania: Capital: Harrisburg, Bird: Ruffed Grouse, Flower: Mountain Laurel

Rhode Island: Capital: Providence, Bird: Rhode Island Red, Flower: Violet

South Carolina: Capital: Columbia, Bird: Great Carolina Wren, Flower: Yellow Jessamine

South Dakota: Capital: Pierre, Bird: Ring-Necked Pheasant, Flower: Pasque Flower
```

Output in Cloud9 IDE of test case 1f (showing updated bird by listing all birds)



```
Welcome to the State Bird and Flower Program!
*** Please choose from the following menu ***

1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
4
*** Thank you for using the State Bird and Flower Program! ***


Process exited with code: 0
```

Output in Cloud9 IDE of test case 1g (showing exit message)



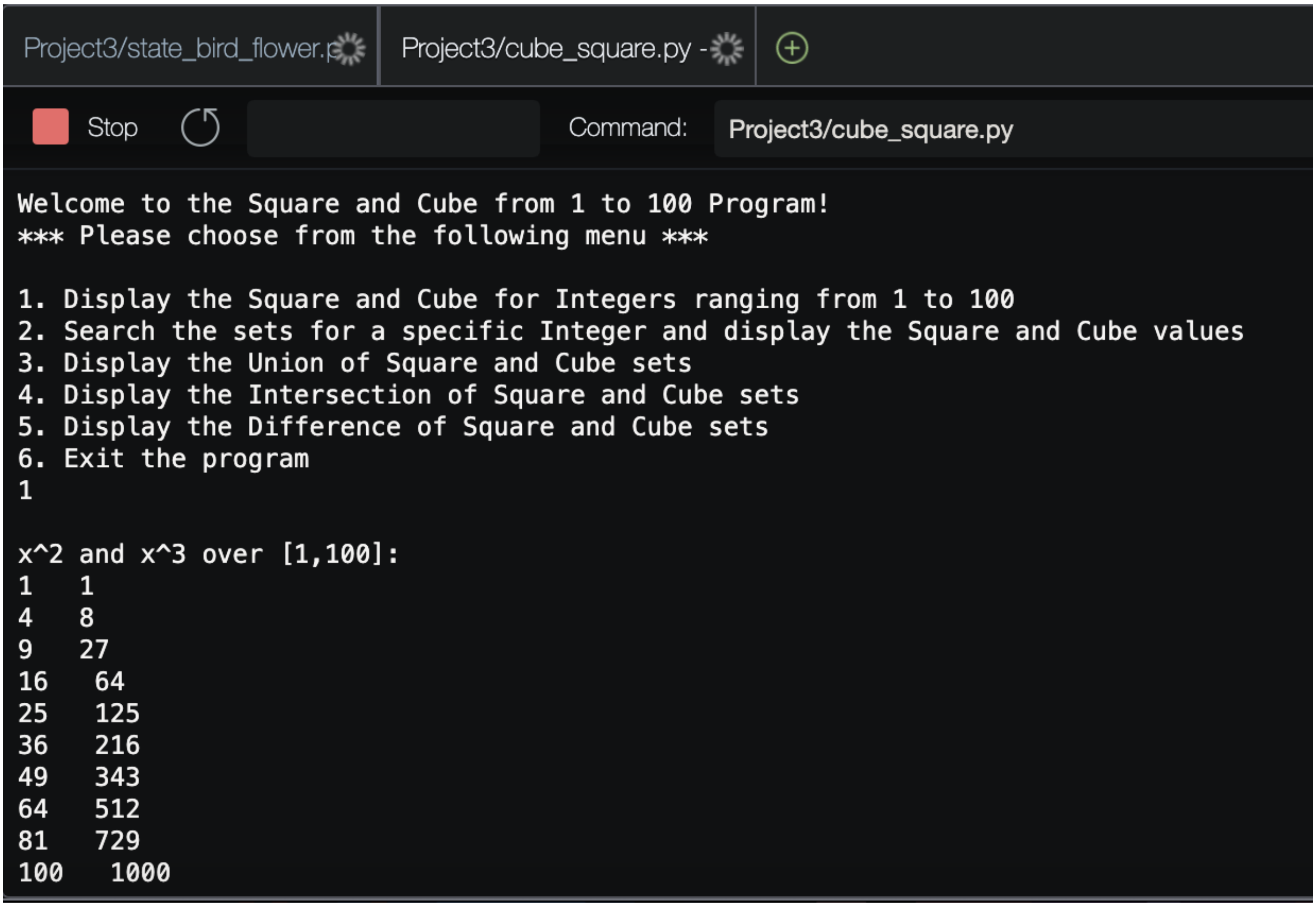
```
1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
a
please use Integer for menu selection

Not a valid response!

1. Display all U.S. States in Alphabetical order along with Capital and Flower
2. Search for a specific state and display the appropriate Capital and Bird
3. Update a Bird for a specific state
4. Exit the program
```

Output in Cloud9 IDE of test case 1g (showing error catching)

Square and Cube from 1 to 100 Program

Test Case	Input	Expected Output	Actual Output	Pass?
2a	1	the Square and Cube for Integers ranging from 1 to 100	the Square and Cube for Integers ranging from 1 to 100	Yes
2b	2, 10	Square and cube values for 10	Integer:10, Square value: 100, Cube value: 1000	Yes
2c	2, 101	Not in set	Integer not in sets	Yes
2d	3	Union of sets	Union of the sets x^2 and x^3 over [1,100] (followed by union)	Yes
2e	4	Intersection of the sets	Intersection of the sets x^2 and x^3 over [1,100](followed the intersection)	Yes
2f	5	Differences of the sets	The two differences of the sets	Yes
2g	c	error	Please use integers! Invalid Selection	Yes
2h	6	Exit program	Thank you for using the Square and Cube from 1 to 100 Program!	Yes

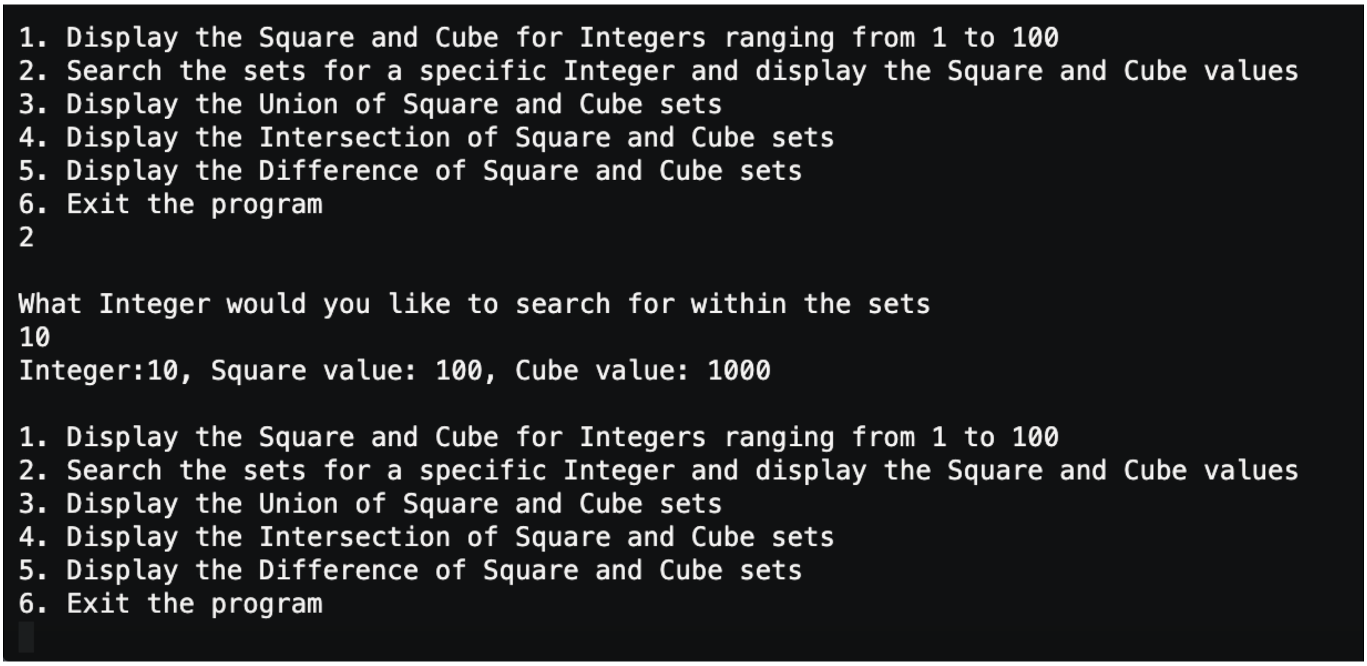
Test Case 2a



```
Welcome to the Square and Cube from 1 to 100 Program!
*** Please choose from the following menu ***

1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
1

x^2 and x^3 over [1,100]:
1   1
4   8
9   27
16   64
25   125
36   216
49   343
64   512
81   729
100   1000
```

Output in Cloud9 IDE of test case 2a (Displaying the square and cube for 1 - 100, the screenshot shows just the beginning of the list)

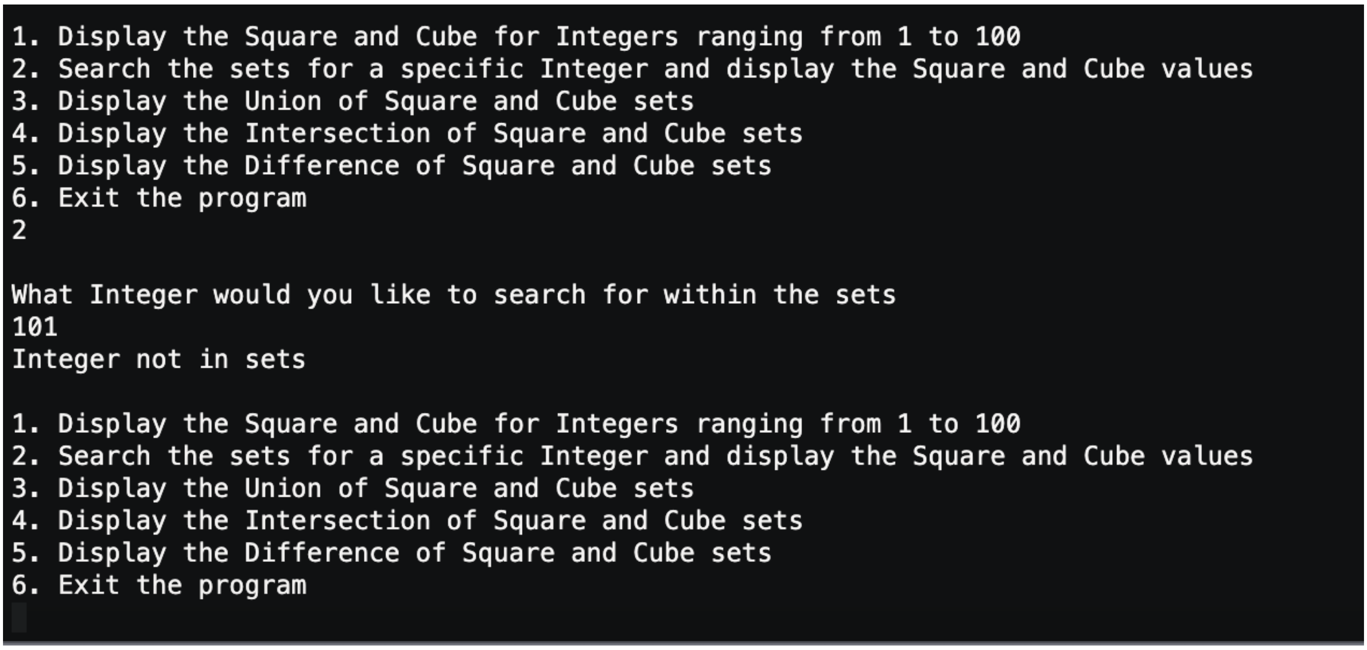
Test Case 2b



```
1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
2

What Integer would you like to search for within the sets
10
Integer:10, Square value: 100, Cube value: 1000

1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
```

Output in Cloud9 IDE of test case 2b (Searching for valid integer in sets)

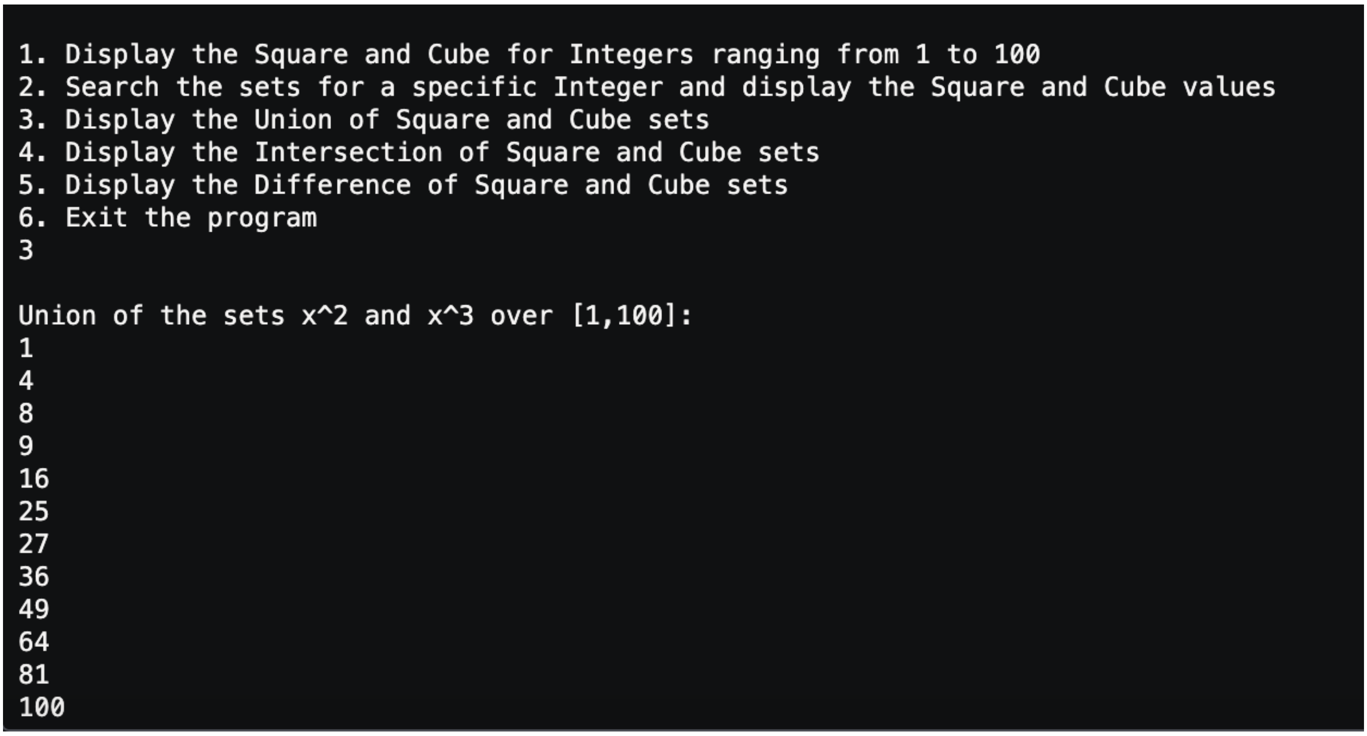
Test Case 2c



```
1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
2

What Integer would you like to search for within the sets
101
Integer not in sets

1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
```

Output in Cloud9 IDE of test case 2c (Searching for integer not in sets)

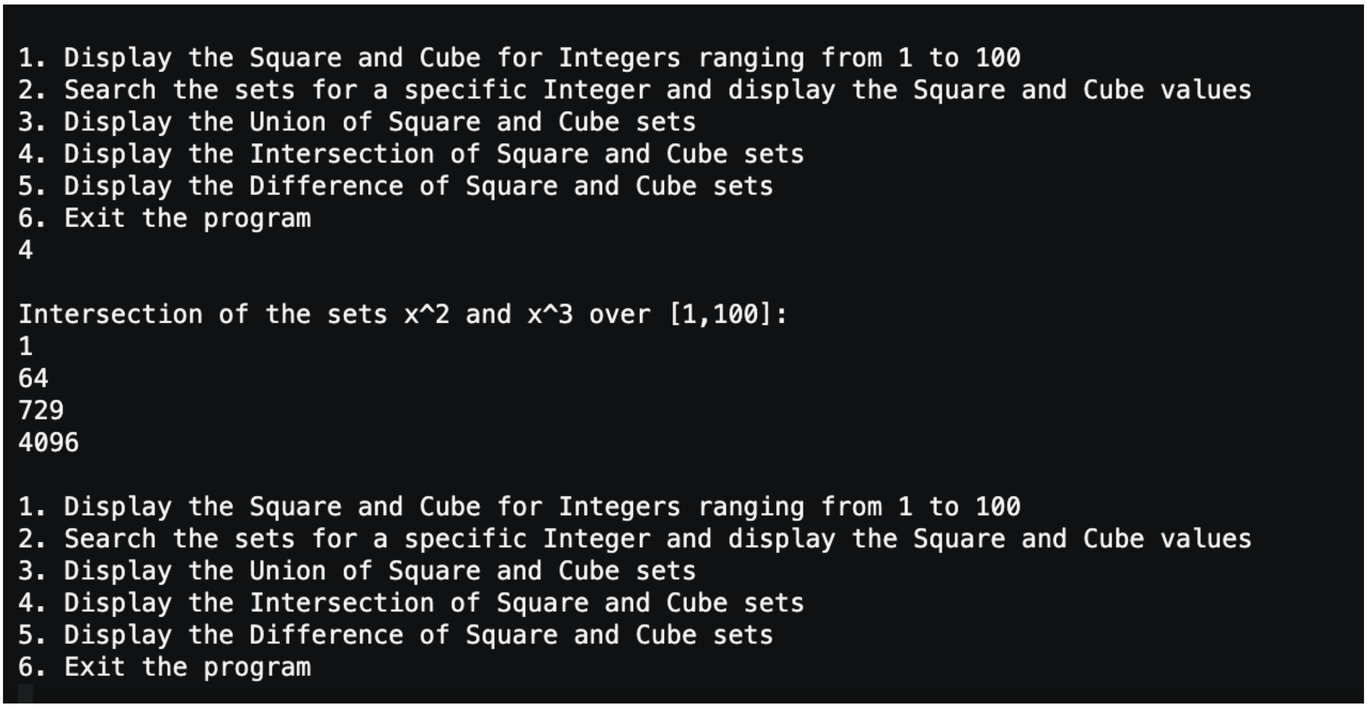
Test Case 2d



```
1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
3

Union of the sets x^2 and x^3 over [1,100]:
1
4
8
9
16
25
27
36
49
64
81
100
```

Output in Cloud9 IDE of test case 2d (Union of sets, this screenshot shows the beginning of the list)

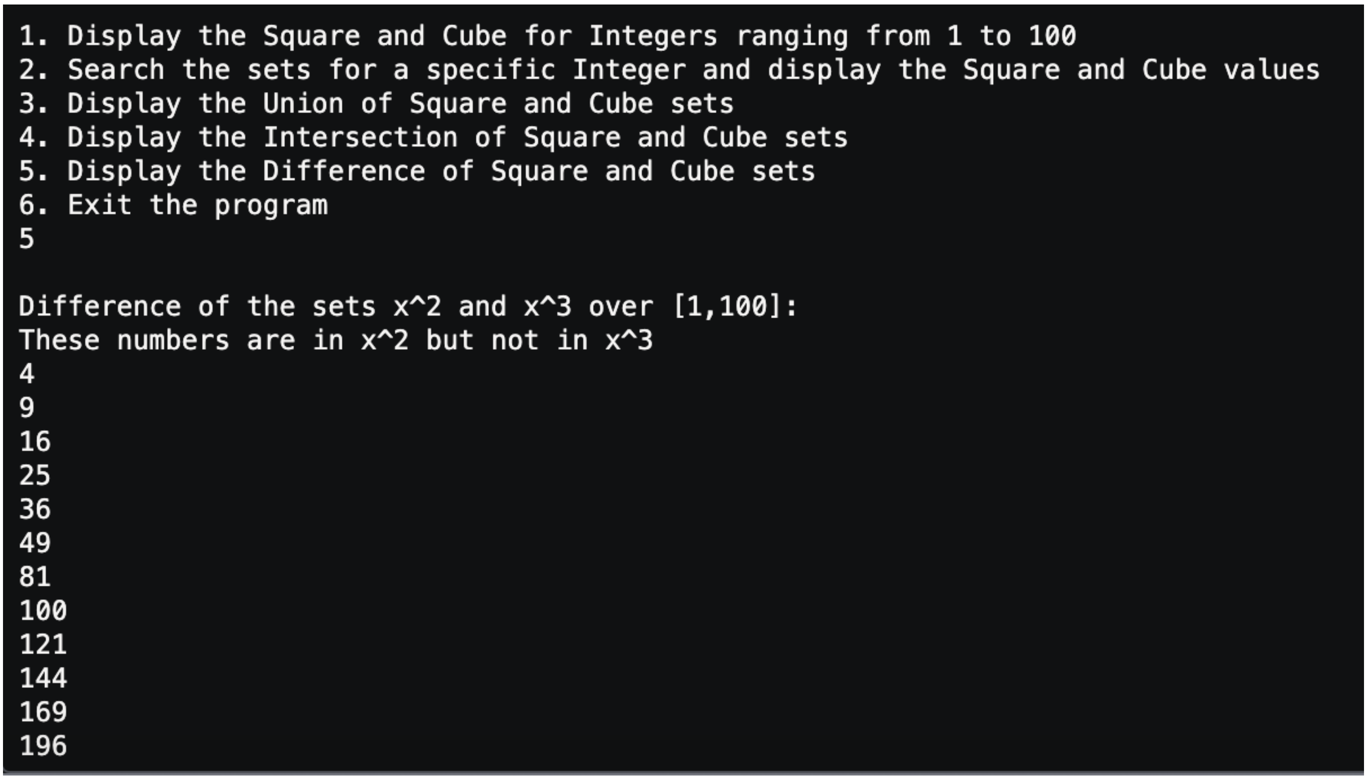
Test Case 2e



```
1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
4

Intersection of the sets x^2 and x^3 over [1,100]:
1
64
729
4096

1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
```

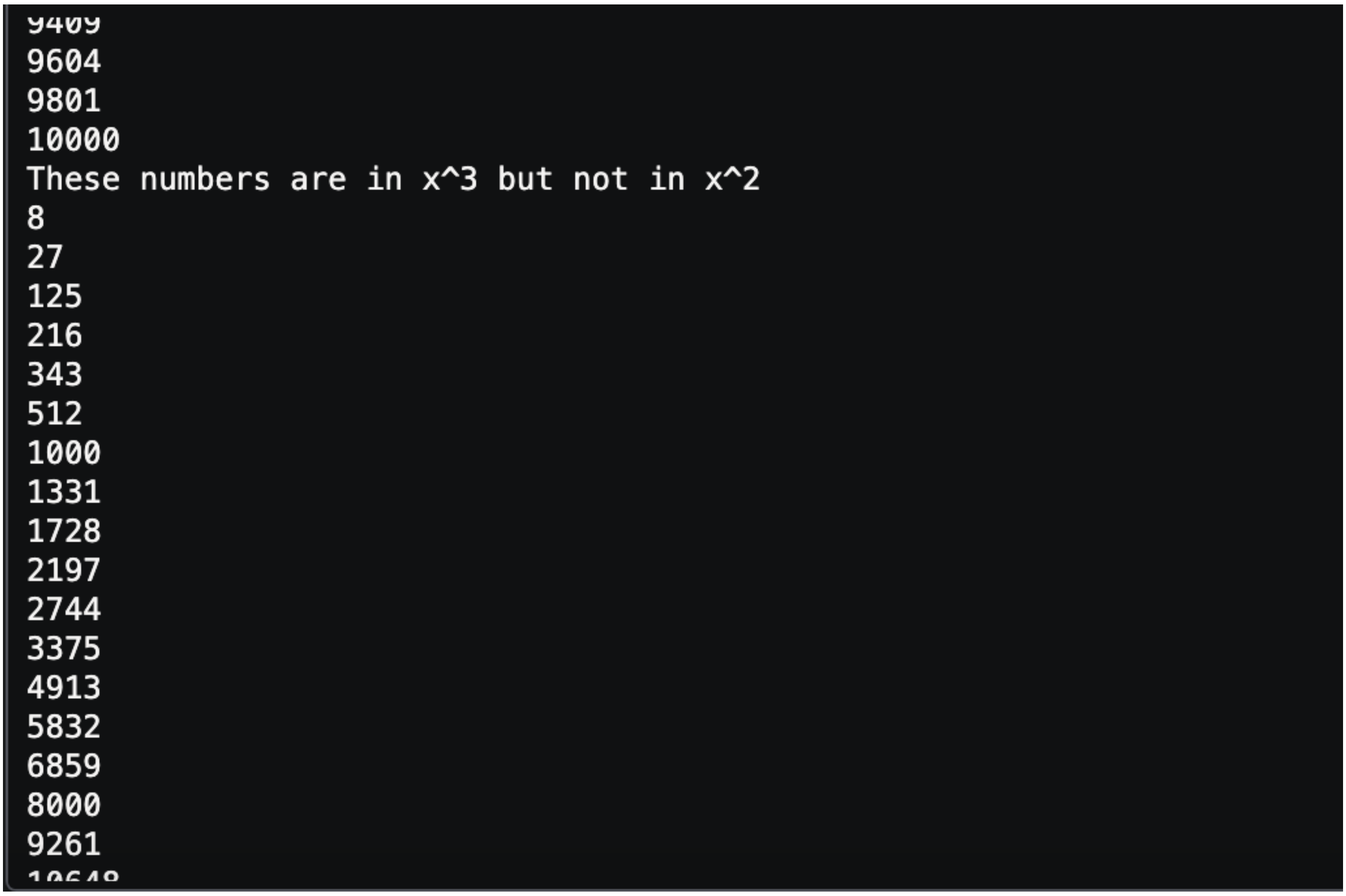
Output in Cloud9 IDE of test case 2e (Intersection of the sets)

Test Case 2f



```
1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
5

Difference of the sets x^2 and x^3 over [1,100]:
These numbers are in x^2 but not in x^3
4
9
16
25
36
49
81
100
121
144
169
196
```

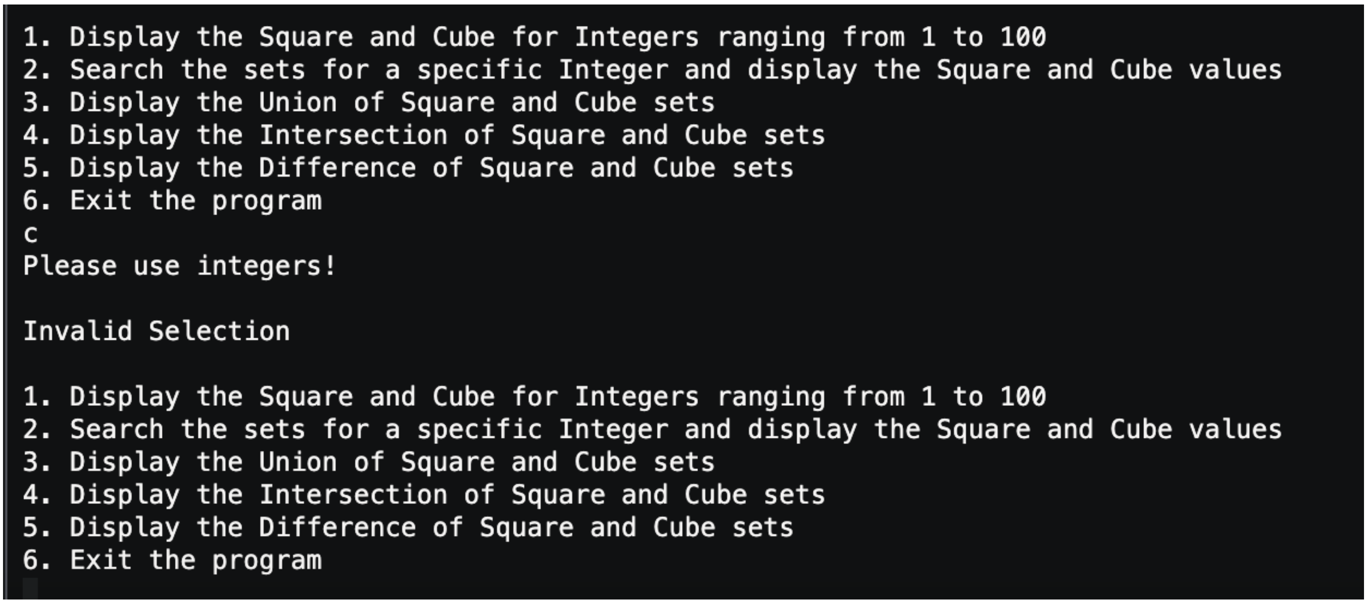
Output in Cloud9 IDE of test case 2f (difference of square set and cube set)



```
9409
9604
9801
10000
These numbers are in x^3 but not in x^2
8
27
125
216
343
512
1000
1331
1728
2197
2744
3375
4913
5832
6859
8000
9261
10648
```

Output in Cloud9 IDE of test case 2f (difference of cube set and square set)

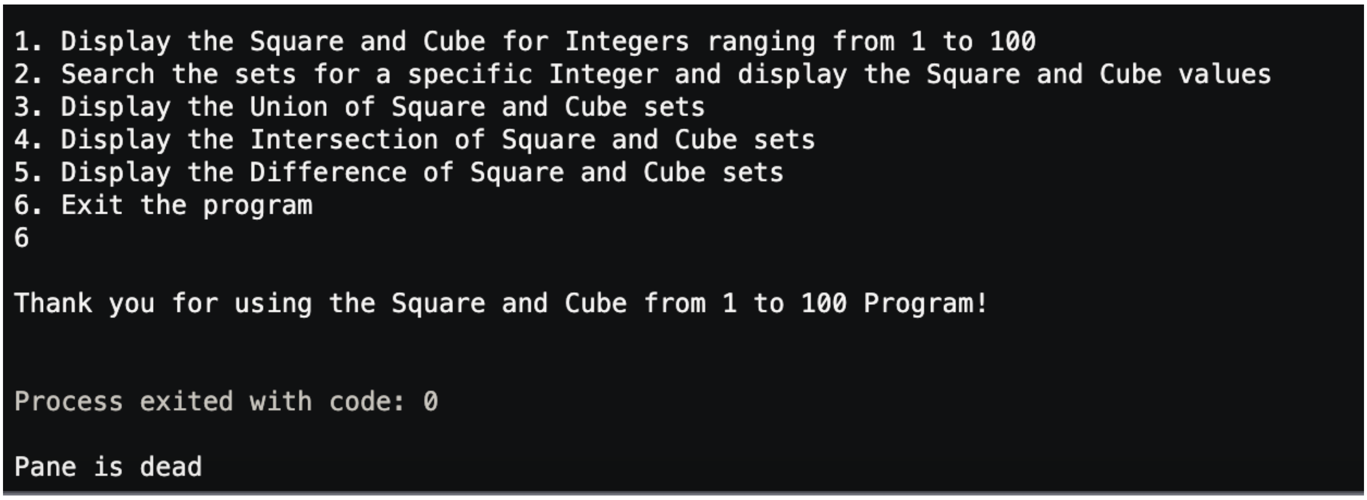
Test Case 2g



```
1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
c
Please use integers!

Invalid Selection

1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
```

Output in Cloud9 IDE of test case 2g (showing response for invalid selection)

Test Case 2h



```
1. Display the Square and Cube for Integers ranging from 1 to 100
2. Search the sets for a specific Integer and display the Square and Cube values
3. Display the Union of Square and Cube sets
4. Display the Intersection of Square and Cube sets
5. Display the Difference of Square and Cube sets
6. Exit the program
6

Thank you for using the Square and Cube from 1 to 100 Program!


Process exited with code: 0

Pane is dead
```

Output in Cloud9 IDE of test case 2g (showing exit message)