

16.1 LAB: Remove gray from RGB



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16.2 LAB: Smallest number

Write a program whose inputs are three integers, and whose output is the smallest of the three values.

Ex: If the input is:

7
15
3

the output is:

3

NaN.2579306.qx3zqy7

LAB
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16.2.1: LAB: Smallest number

10 / 10



main.py

Load default template...

```
1 """Type your code here."""
2
3 x = int(input())
4 y = int(input())
5 z = int(input())
6
7 mylist = []
8 mylist.append(x)
9 mylist.append(y)
10 mylist.append(z)
11 print(min(mylist))
12
```

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Develop mode

Submit mode

Run your program as often as you'd like, before submitting for grading. Below, type any needed input values in the first box, then click **Run program** and observe the program's output in the second box.

Enter program input (optional)

If your code requires input values, provide them here:

Run program

Input (from above)

main.py
(Your program)

0

Program output displayed here

Coding trail of your work What is this?

4/20 W----0-----10 min:15

16.3 LAB: Interstate highway numbers



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16.4 LAB: Seasons

Write a program that takes a date as input and outputs the date's season in the northern hemisphere. The input is a string to represent the month and an int to represent the day.

Ex: If the input is:

April
11

the output is:

Spring

In addition, check if the string and int are valid (an actual month and day).

Ex: If the input is:

Blue
65

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the output is:

Invalid

The dates for each season in the northern hemisphere are:

Spring: March 20 - June 20

Summer: June 21 - September 21

Autumn: September 22 - December 20

Winter: December 21 - March 19

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LAB
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16.4.1: LAB: Seasons

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main.py

Load default template...

```
1 input_month = input()
2 input_day = int(input())
3
4 ''' Type your code here. '''
5
```

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Develop mode

Submit mode

Run your program as often as you'd like, before submitting for grading. Below, type any needed input

values in the first box, then click **Run program** and observe the program's output in the second box.

Enter program input (optional)

If your code requires input values, provide them here.

Run program

Input (from above)



main.py
(Your program)



0

Program output displayed here

Coding trail of your work What is this?

History of your effort will appear here once you begin working on this zyLab.

16.5 LAB: Exact change



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16.6 LAB: Leap year

A year in the modern Gregorian Calendar consists of 365 days. In reality, the earth takes longer to rotate around the sun. To account for the difference in time, every 4 years, a leap year takes place. A leap year is when a year has 366 days: An extra day, February 29th. The requirements for a given year to be a leap year are:

- 1) The year must be divisible by 4
- 2) If the year is a century year (1700, 1800, etc.), the year must be evenly divisible by 400

Some example leap years are 1600, 1712, and 2016.

Write a program that takes in a year and determines whether that year is a leap year.

Ex: If the input is:

1712

the output is:

1712 - leap year

Ex: If the input is:

1913

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the output is:

1913 - not a leap year

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16.6.1: LAB: Leap year

0 / 10



main.py

Load default template...

```
1 is_leap_year = False
2
3 input_year = int(input())
4
5 ''' Type your code here. '''
```

Develop mode

Submit mode

Run your program as often as you'd like, before submitting for grading. Below, type any needed input values in the first box, then click **Run program** and observe the program's output in the second box.

Enter program input (optional)

If your code requires input values, provide them here.

Run program

Input (from above)

main.py
(Your program)

0

Program output displayed here

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Coding trail of your work

What is this?

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16.7 LAB: Warm up: Automobile service cost

(1) Prompt the user for an automobile service. Output the user's input. (1 pt)

Ex:

```
Enter desired auto service:
Oil change
You entered: Oil change
```

(2) Output the price of the requested service. (4 pts)

Ex:

```
Enter desired auto service:
Oil change
You entered: Oil change
Cost of oil change: $35
```

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The program should support the following services (all integers):

- Oil change -- \$35
- Tire rotation -- \$19
- Car wash -- \$7

If the user enters a service that is not listed above, then output the following error message:

Error: Requested service is not recognized

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16.7.1: LAB: Warm up: Automobile service cost

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main.py

Load default template...

1 # Type your code here

Develop mode

Submit mode

Run your program as often as you'd like, before submitting for grading. Below, type any needed input values in the first box, then click **Run program** and observe the program's output in the second box.

Enter program input (optional)

If your code requires input values, provide them here.

Run program

Input (from above)



main.py

(Your program)



0

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Program output displayed here

Coding trail of your work What is this?

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16.8 LAB*: Program: Automobile service invoice

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(1) Output a menu of automotive services and the corresponding cost of each service. (2 pts)

Ex:

```
Davy's auto shop services
Oil change -- $35
Tire rotation -- $19
Car wash -- $7
Car wax -- $12
```

(2) Prompt the user for two services from the menu. (2 pts)

Ex:

```
Select first service:
Oil change
Select second service:
Car wax
```

(3) Output an invoice for the services selected. Output the cost for each service and the total cost. (3 pts)

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```
Davy's auto shop invoice

Service 1: Oil change, $35
```


Service 2: Car wax, \$12

Total: \$47

(4) Extend the program to allow the user to enter a dash (-), which indicates no service. (3 pts)

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Ex:

Davy's auto shop services

Oil change -- \$35

Tire rotation -- \$19

Car wash -- \$7

Car wax -- \$12

Select first service:

Tire rotation

Select second service:

-

Davy's auto shop invoice

Service 1: Tire rotation, \$19

Service 2: No service

Total: \$19

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16.8.1: LAB*: Program: Automobile service invoice

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main.py

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Load default template...

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1 # Type your code here

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Develop mode

Submit mode

Run your program as often as you'd like, before submitting for grading. Below, type any needed input values in the first box, then click **Run program** and observe the program's output in the second box.

Enter program input (optional)

If your code requires input values, provide them here.

Run program

Input (from above)



main.py
(Your program)



0

Program output displayed here

Coding trail of your work What is this?

History of your effort will appear here once you begin working on this zyLab.

16.9 LAB: Golf scores



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