

# Coding Solutions

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**Some may think:**

The tech industry is  
desperately trying to hire  
computer programmers in  
California

~~The tech~~ **every** industry is  
desperately trying to hire  
computer programmers ~~in~~  
~~California~~ **everywhere**

**Some may think:**

Computer science is just  
about learning technology

~~Computer science is just  
about learning technology~~

**Computer science is about  
logic, problem solving,  
and creativity**

# Objective

Students will demonstrate their knowledge of introductory computer programming principles using Python 3

# Why Python?

- Get started quicker
- Concepts over syntax
- One of the top 5 programming languages

# Repl.it

- Online compiler
- Browser and internet access
- No additional software needed
- Python 3



# Repl.it



Math #5 Inputs (preview)

my repls

teacher

student

notifications

talk

learn/teach

EnriqueGuzm...

back to edit

run ▶



Due: --

submit

```
1 #Give instructions to user
2 print('Enter 2 integers')
3
4 #Ask user for 2 inputs
5 int1 = input()
6 int2 = input()
7
8 # Add up the integers
9
10 #Find the product
11
12 #find of the power
```

Instructions from your teacher:

Prompt the user to input 2 integers and output the following:

- The Sum of the integers
- The Product of the integers
- the first integer to the power of the second integer.

Enter 2 integers:

2  
3

The sum of 2 and 3 is 5.

The product of 2 and 3 is 6.

2 to the power 3 is 8.

Python 3.7.4 (default, Jul 9 2019, 00:06:43)  
[GCC 6.3.0 20170516] on linux



# Competition Overview

- Technical Challenges
  - Debug
  - Coding
- Time limit: 60 Minutes
  - For entire challenge not each
- Pair Programming, no more, no less
- Points are earned for each final test passed
- Tiebreaker: Order of submission
- Preparing students for future opportunities

# Competition Logistics

- Student accounts
- Both students must be present
- Pairs designate account for MESA Day
- At least one individual must have complete 75% of assignments
- Program testing is automated
  - Formatting will be important

# Debug

- Teams are provided an incomplete program
- Fix the code as needed to the desire output
- Errors:
  - Syntax
  - Missing operators
  - Misspelling
  - Case sensitivity
  - etc...

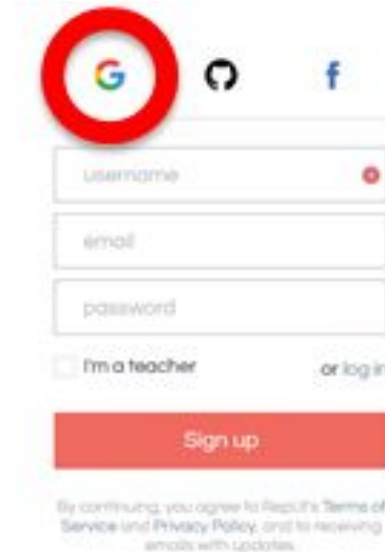
# Technical Test

- Program a solution for the given prompt
- Follow the prompt closely
- Test cases and final testing differ
  - Test cases, students can test their code for given solutions
  - Final testing, their code is tested against a different set of inputs
- Code should be flexible
  - Hard coded solutions unlikely to pass tests run by the proctors
  -

# The UI

# Create an account

1. Sign up to relp.it <https://repl.it/signup>
  - a. A personal google account recommended to use as your login, click the G icon.



The image shows a web form for creating an account on Repl.it. At the top, there are three social media icons: a Google 'G' icon (circled in red), a GitHub icon, and a Facebook 'f' icon. Below these are three input fields labeled 'username', 'email', and 'password'. Under the 'password' field is a checkbox labeled 'I'm a teacher' and a link 'or log in'. A large red button labeled 'Sign up' is positioned below the form. At the bottom, there is a small line of text: 'By continuing, you agree to Repl.it's Terms of Service and Privacy Policy, and to receiving emails with updates.'

Classroom Link

<http://tiny.cc/mesasmart19>



⋮ ◀ back to edit

run ▶

run tests



```
1 #Use the print function
```

**Code Goes here**

```
Python 3.7.4 (default, Jul 9 2019, 00:06:43)
[GCC 6.3.0 20170516] on linux
```

**Output results  
from above**

Due: --

submit

Instructions from your teacher:

Write a program with the following output

```
Hello, world!
```

**Assignment/Coding  
Challenge**

**Sample Output**

 back to assignment

run code

Due: no date

3.8. If/else: Minimum of three numbers

```
1 a = int(input())
2 b = int(input())
3 c = int(input())
4 if a > b:
5     if b < c:
6         print(b)
7     else:
8         print(c)
9 elif a < c:
10    print(a)
11 else:
12    print(c)
13
```

Assignment  
timestampMESA Day  
Tiebreaker

### Statement

Given three integers, print the least of them.

### Example input

```
5
3
7
```

### Example output

```
3
```

### Theory

If you don't know how to start solving this assignment, please, review a theory for this lesson:

[https://snakify.org/lessons/if\\_then\\_else\\_conditions/](https://snakify.org/lessons/if_then_else_conditions/)

You may also try step-by-step theory chunks:

[https://snakify.org/lessons/if\\_then\\_else\\_conditions/steps/1/](https://snakify.org/lessons/if_then_else_conditions/steps/1/)

```
Python 3.7.4 (default, Jul 9 2019, 00:06:43)
[GCC 6.3.0 20170516] on linux
```

back to assignment

run code

run tests



Due: no date

3.8. If/else: Minimum of three numbers

```
1 a = int(input())
2 b = int(input())
3 c = int(input())
4 if a > b:
5     if b < c:
6         print(b)
7     else:
8         print(c)
9 elif a < c:
10    print(a)
11 else:
12    print(c)
13
```

### Assignment tests

passed all tests

1

2

3

4

Close

```
Python 3.7.4 (default, Jul 9 2019, 00:06:40)
[GCC 6.3.0 20170516] on linux
```



◀ back to assignment

run code



Due: no date

3.8. If/else: Minimum of three numbers

run tests

```
1 a = int(input())
2 b = int(input())
3 c = int(input())
4 if a < b:
5     if b < c:
6         print(b)
7     else:
8         print(c)
9 elif a < c:
10    print(a)
11 else:
12    print(c)
13
```

We change  
the > to a <

Program no  
longer works

### Assignment tests

failed

1 - Output mismatch

Close

Show details

```
Python 3.7.4 (default, Jul 9 2019, 00:06:44)
[GCC 6.3.0 20170516] on linux
```

◀ back to assignment

```
1 a = int(input())
2 b = int(input())
3 c = int(input())
4 if a < b:
5     if b < c:
6         print(b)
7     else:
8         print(c)
9 elif a < c:
10    print(a)
11 else:
12    print(c)
13
```

```
Python 3.7.4 (default, Jul 9 2019, 6
[GCC 6.3.0 20170516] on linux
```

## 1 - details

Failure reason: Output mismatch

Teacher's input:

```
5
3
7
```

Teacher expected to see:

```
3
```

Your output:

```
5
```

Difference:

```
35
```

Close

8. If/else: Minimum of three numbers

em.

his assignment, please, review a theory for this

conditions/

unks:

conditions/steps/1/

