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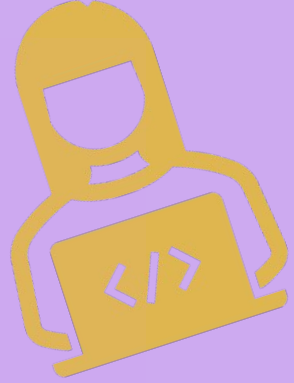
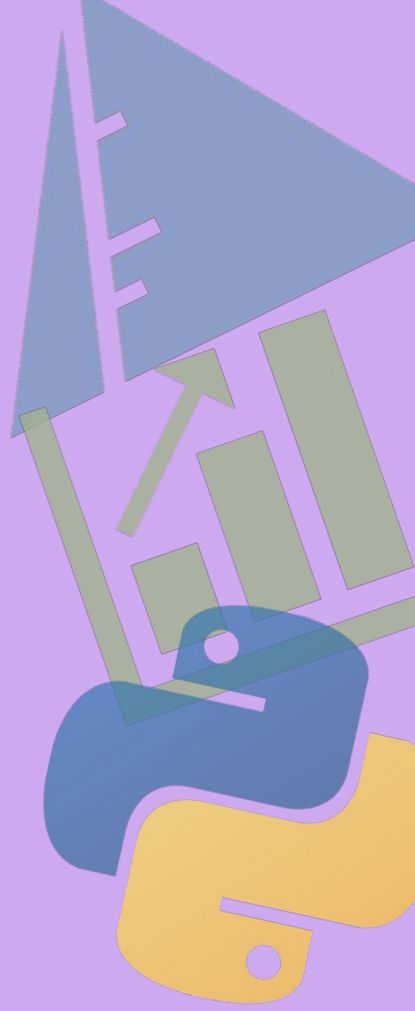
Natural Disaster Training

Level 1- Python





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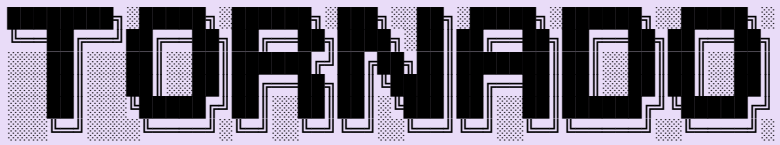
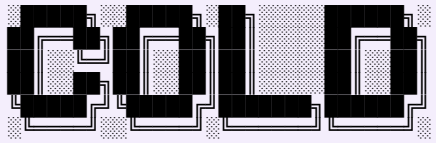
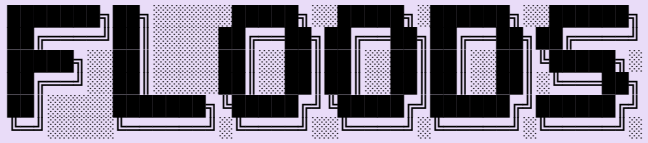
Introduction

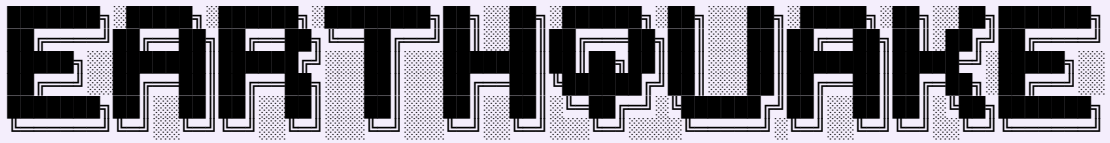
Calling all adventurers! What are the signs for spotting natural disasters? Staying safe in an extreme event could save lives!

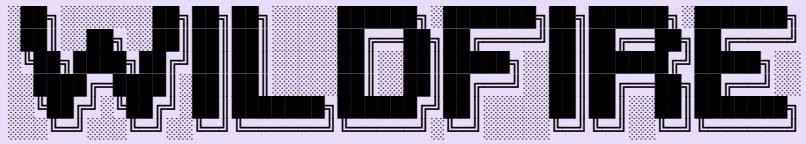
Being able to identify risks and even create a family communication plan for risks in your area can help us remember what to do to stay safe in the case of an emergency.

ASCII Art	Information

	• A tornado is a spinning column of air. Tornadoes have strong winds that can cause a lot of damage to things in their paths.
	• These signs may help you know that a tornado is coming:
	  ○ Dark or green coloured sky
	  ○ Funnel cloud
	  ○ Loud train-like sound
	  ○ Hail

	• Temperature tells you how hot or cold the air is. During winter, the air outside can get very cold. • Tell an adult if you feel cold or numb when playing outside
	• When a lot of rain comes or a river overflows, that can bring a flood. Floods that happen very quickly are called flash floods. • Playing in flood water is not safe and could make you sick. • Moving water can sweep you off your feet fast. If you see flood water, never walk through it. Tell adults not to drive through it.

	• An earthquake is when the rock under the earth's surface moves. When that happens, the ground under your feet can shake, move, or crack.
	• If the ground starts shaking:
	  ○ Drop where you are, onto your hands and knees
	  ○ Cover your head and neck. Crawl under a nearby sturdy table or desk if you can.
	  ○ Hold On until the shaking stops.

	• A wildfire is a fire that burns through forests and other wildlands. In some places, the weather may be really dry for a long period of time. A dangerous wildfire can start quickly in these conditions. • Sometimes wildfires come close to houses. When this happens, you may be asked to leave your home and travel to a safe place. • Remember, this is called EVACUATING.

Task

- Write an informative quiz using a few of the following disasters on the next slide
- Use ASCII art to make the quiz look more interactive and exciting

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Process

- ✔ Use ascii art for the name of each disaster
- ✔ Display a mix of information to the user and questions for them to answer
- ✔ Keep track of the score

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Adding 1 to a variable (score)

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In python, you can use the operator += to increase something by a certain amount (in the example 1 is added to num1 (15+1=16)

```
num1 = 15
num2 = 3
num3 = 19

num1 += 1
print(num1)
```

```
16
```

Step 1:

Keeping score

We will declare the variable (temporary place in memory for data that can be changed during the running of the program) at the at the start of the program, on line 1

```
1 score=0
```

When the user gets the answer correct in the quiz, 1 will be added onto the score

```
14      score+=1
```

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Input and Output

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Output is the process of supplying information to the user.

In python, we use the print() statement.

```
print("Hello World!")
```

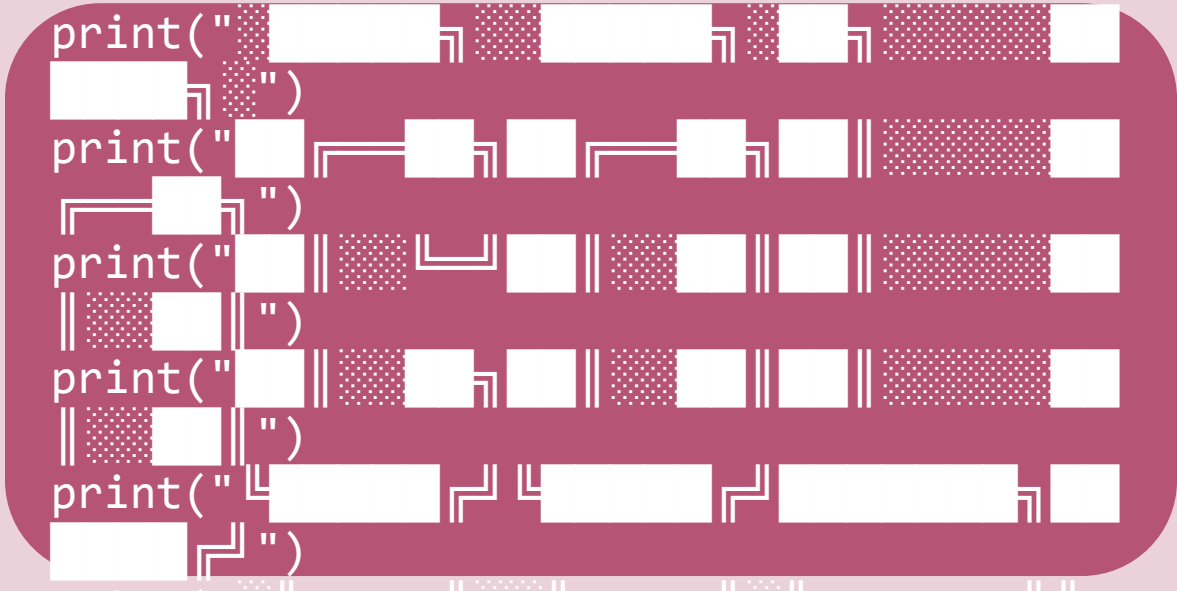
Input is the process of receiving information from the user.

We do this using the input() statement.

We can store the user's data in variables!

```
print("What is your name?: ")
name = input()
```

When printing ASCII art, use one print statement for each line



Step 2

Inputting and outputting

OUTPUT: The title in ASCII art is printed on individual lines across lines 2-7) and in lines 9 and 10 the user is given some information about tornados

```
 2 print("
 3 print("
 4 print("
 5 print("
 6 print("
 7 print("
 8
 9 print("A tornado is a spinning column of air and cause lots of danage")
10 print("Signs a tornado might be coming :")
11 answer=input("What colour will the sky go if there is a tornado coming? ")
```

INPUT: an input from the user to the question about sky colour is stored in a variable called “answer”

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IF Statements

```
1  print("Enter a number: ")
2  num = int(input())
3
4  if num == 10:
5      print("Number is equal to 10")
6
7  elif num > 10:
8      print("Number is greater than 10")
9
10 else:
11     print("Number is less than 10")
12
```

The IF statement is a decision-making statement that guides a program to make decisions based on specified criteria.

The IF statement executes one set of code if a specified condition is met (TRUE) or another set of code evaluates to FALSE.

Step 3

Simple if statement to check for correct answer

Checks to see if the answer entered by the user, matches the answer that the computer is programmed as correct

If the user gets the answer correct, 1 is added onto their score in line 15

```
12 if answer=="green":
13     print("correct")
14     score+=1
15
```

For the users answer to be considered correct, it will have to be written the exact same as here (just green”. Python is case sensitive and so it has to be entered with the same case and same amount of spaces and punctuation between words.

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Step 4

Repeat for multiple questions

Click the icon to see code for each disaster

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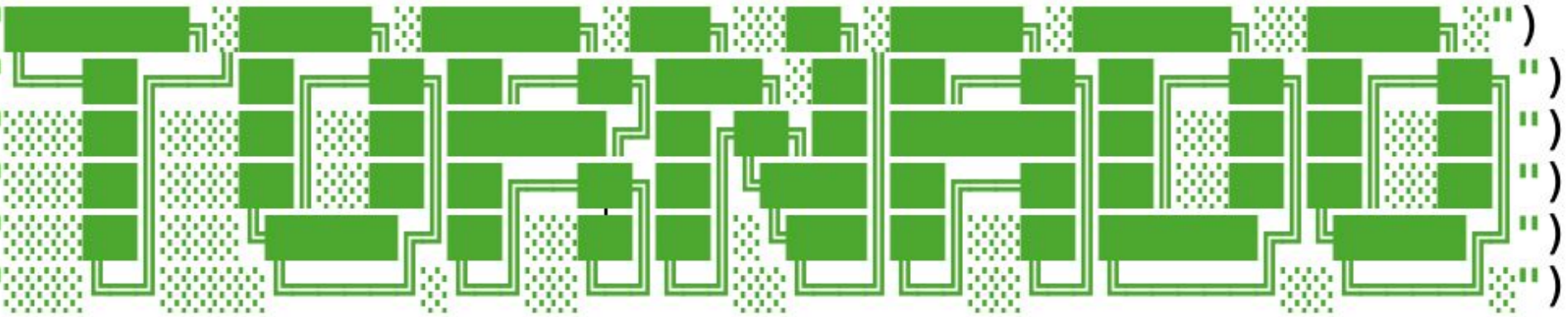
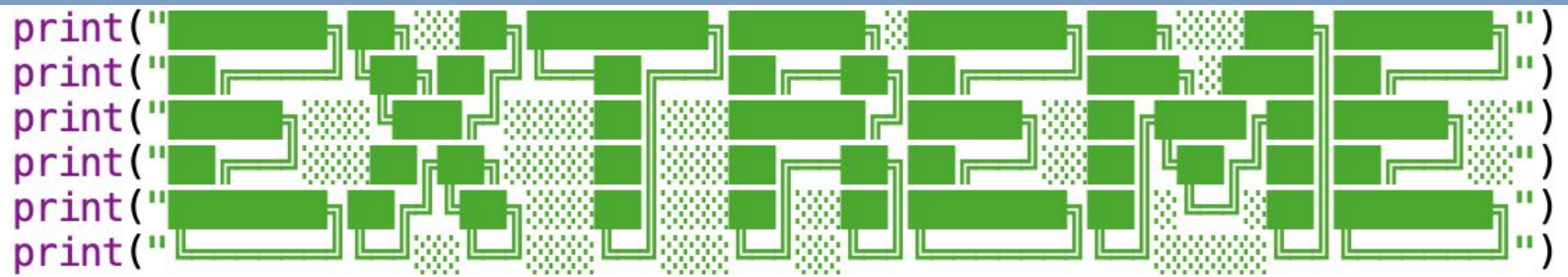
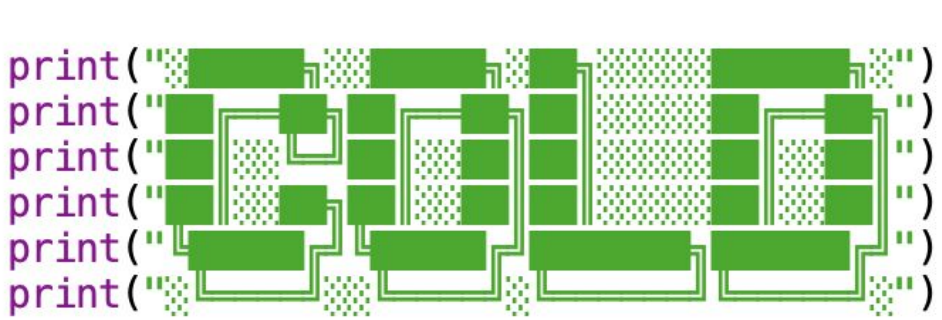
```
score=0
print("
print("
print("
print("
print("
print("
print("
print("A tornado is a spinning column of air and cause lots of danage")
print("Signs a tornado might be coming :")
answer=input("What colour will the sky go if there is a tornado coming? ")
if answer=="green"
    print("correct")
    score+=1

print("Dark or green colored sky; Funnel cloud; Loud train-like sound; Hail")
```



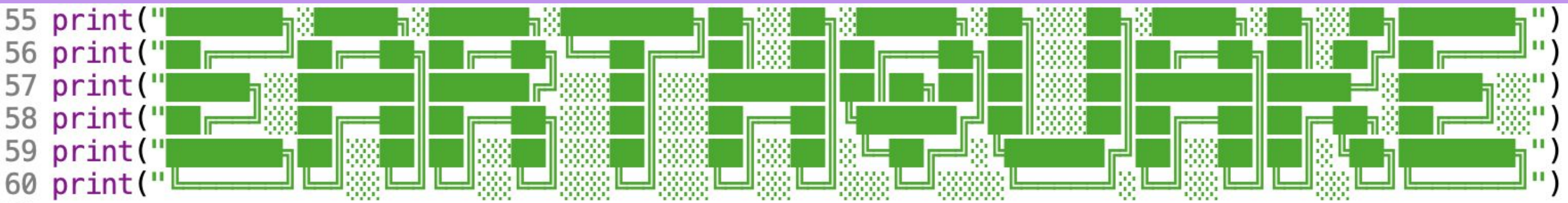




```
print("Temperature tells you how hot or cold the air is. During winter, the air outside can get very cold.")
answer=input("What type of precipitation means it is cold outside? ")
if answer=="snow":
    print("correct")
    score+=1

print("Remember, tell an adult if you feel cold or numb while playing outside.")
```

```
41 print("
42 print("
43 print("
44 print("
45 print("
46 print("
47
48 print("Which of the following causes floods a)river b)sandpit c)clouds")
49 if answer=="a":
50     print("correct")
51     score+=1
52 print("Moving water can sweep you off your feet fast. If you see flood water, never walk through it. Tell adults not to drive through it.")
53
```




```
print("An earthquake is when the rock under the earth's surface moves. When that happens, the ground under your feet can shake, move, or crack.")
answer=input("what are the three steps to perform if the ground starts shaking")
if answer=="drop, cover, hold on":
    print("correct")
    score+=1
```

Step 4

Outputting the final score

When printing a variable, speech marks are not needed, unlike when you print text

Use a comma to connect the text in green to the variable when printing

```
68 print("Your final score is ",score)
```

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What the code should look like…

```
score=0
print("  _____ ___  ____  _   _    _    ____   ___  ")
print(" |_   _/ _ \|  _ \| \ | |  / \  |  _ \ / _ \ ")
print("   | || | | | |_) |  \| | / _ \ | | | | | | |")
print("   | || |_| |  _ <| |\  |/ ___ \| |_| | |_| |")
print("   |_| \___/|_| \_\_| \_/_/   \_\____/ \___/ ")

print("A tornado is a spinning column of air and cause lots of danage")
print("Signs a tornado might be coming :")
answer=input("What colour will the sky go if there is a tornado coming? ")
if answer=="green"
    print("correct")
    score+=1

print("Dark or green colored sky; Funnel cloud; Loud train-like sound; Hail")
print("  _____ _  _____ ____  _____ __  __ _____ ")
print(" | ____| |/ /_ _|  _ \| ____|  \/  | ____|")
print(" |  _| | ' / | || |_) |  _| | |\/| |  _|  ")
print(" | |___| . \ | ||  _ <| |___| |  | | |___ ")
print(" |_____|_|\_\___|_| \_\_____|_|  |_|_____|")

print("  ____ ___  _     ____  ")
print(" / ___/ _ \| |   |  _ \ ")
print("| |  | | | | |   | | | |")
print("| |__| |_| | |___| |_| |")
print(" \____\___/|_____|____/ ")

print("Temperature tells you how hot or cold the air is. During winter, the air outside can get very cold.")
answer=input("What type of precipitation means it is cold outside? ")
if answer=="snow":
    print("correct")
    score+=1

print("Remember, tell an adult if you feel cold or numb while playing outside.")

print("  _____ _     ___   ___  ____  ")
print(" |  ___| |   / _ \ / _ \|  _ \ ")
print(" | |_  | |  | | | | | | | | | |")
print(" |  _| | |__| |_| | |_| | |_| |")
print(" |_|   |_____\___/ \___/|____/ ")

print("Which of the following causes floods a)river b)sandpit c)clouds")
if answer=="a":
    print("correct")
    score+=1
print("Moving water can sweep you off your feet fast. If you see flood water, never walk through it. Tell adults not to drive through it.")

print("  _____    _    ____ _____   _____ _   _ _____ ")
print(" |  ___|  / \  / ___|_   _| |_   _| | | | ____|")
print(" | |_ / _ \ \___ \ | |     | | | |_| |  _|  ")
print(" |  _/ ___ \ ___) || |     | | |  _  | |___ ")
print(" |_|/_/   \_\____/ |_|     |_| |_| |_|_____|")
print("  _____ ___  ____  _   _    _    ____   ___  ")
print(" |_   _/ _ \|  _ \| \ | |  / \  |  _ \ / _ \ ")
print("   | || | | | |_) |  \| | / _ \ | | | | | | |")
print("   | || |_| |  _ <| |\  |/ ___ \| |_| | |_| |")
print("   |_| \___/|_| \_\_| \_/_/   \_\____/ \___/ ")

print("An earthquake is when the rock under the earth's surface moves. When that happens, the ground under your feet can shake, move, or crack.")
answer=input("what are the three steps to perform if the ground starts shaking")
if answer=="drop, cover, hold on":
    print("correct")
    score+=1
```

```
  _____ ___  ____  _   _    _    ____   ___
 |_   _/ _ \|  _ \| \ | |  / \  |  _ \ / _ \
   | || | | | |_) |  \| | / _ \ | | | | | | |
   | || |_| |  _ <| |\  |/ ___ \| |_| | |_| |
   |_| \___/|_| \_\_| \_/_/   \_\____/ \___/
A tornado is a spinning column of air and cause lots of danage
Signs a tornado might be coming :
What colour will the sky go if there is a tornado coming? green
correct
Dark or green colored sky; Funnel cloud; Loud train-like sound; Hail
  _____ _  _____ ____  _____ __  __ _____
 | ____| |/ /_ _|  _ \| ____|  \/  | ____|
 |  _| | ' / | || |_) |  _| | |\/| |  _|
 | |___| . \ | ||  _ <| |___| |  | | |___
 |_____|_|\_\___|_| \_\_____|_|  |_|_____|
  ____ ___  _     ____
 / ___/ _ \| |   |  _ \
| |  | | | | |   | | | |
| |__| |_| | |___| |_| |
 \____\___/|_____|____/
Temperature tells you how hot or cold the air is. During winter, the air outside can get very cold.
What type of precipitation means it is cold outside? snow
correct
Remember, tell an adult if you feel cold or numb while playing outside.
  _____ _     ___   ___  ____
 |  ___| |   / _ \ / _ \|  _ \
 | |_  | |  | | | | | | | | | |
 |  _| | |__| |_| | |_| | |_| |
 |_|   |_____\___/ \___/|____/
Which of the following causes floods a)river b)sandpit c)clouds
Moving water can sweep you off your feet fast. If you see flood water, never walk through it. Tell adults not to drive through it.
  _____    _    ____ _____   _____ _   _ _____
 |  ___|  / \  / ___|_   _| |_   _| | | | ____|
 | |_ / _ \ \___ \ | |     | | | |_| |  _|
 |  _/ ___ \ ___) || |     | | |  _  | |___
 |_|/_/   \_\____/ |_|     |_| |_| |_|_____|
  _____ ___  ____  _   _    _    ____   ___
 |_   _/ _ \|  _ \| \ | |  / \  |  _ \ / _ \
   | || | | | |_) |  \| | / _ \ | | | | | | |
   | || |_| |  _ <| |\  |/ ___ \| |_| | |_| |
   |_| \___/|_| \_\_| \_/_/   \_\____/ \___/
An earthquake is when the rock under the earth's surface moves. When that happens, the ground under your feet can shake, move, or crack.
what are the three steps to perform if the ground starts shaking?
Your final score is  2
>>>
```

Conclusion

Learning outcomes: in this session you should have learned to

- ✔ Use output function (print)
- ✔ Use input function (input)
- ✔ Use if statements
- ✔ Update a score by 1 (increment score by 1)
- ✔ Use ASCII art to make a nice graphical user interface

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Links to everyday life…

Environment- Play- Helping others

play - interactive quiz with makes staying safe fun

helping others- helping others become aware about natural hazards as well

environment- being aware about the forces of nature

Book available in many languages to help prepare

- https://www.ready.gov/sites/default/files/2019-06/prepare_with_pedro_activity_book_eng.pdf

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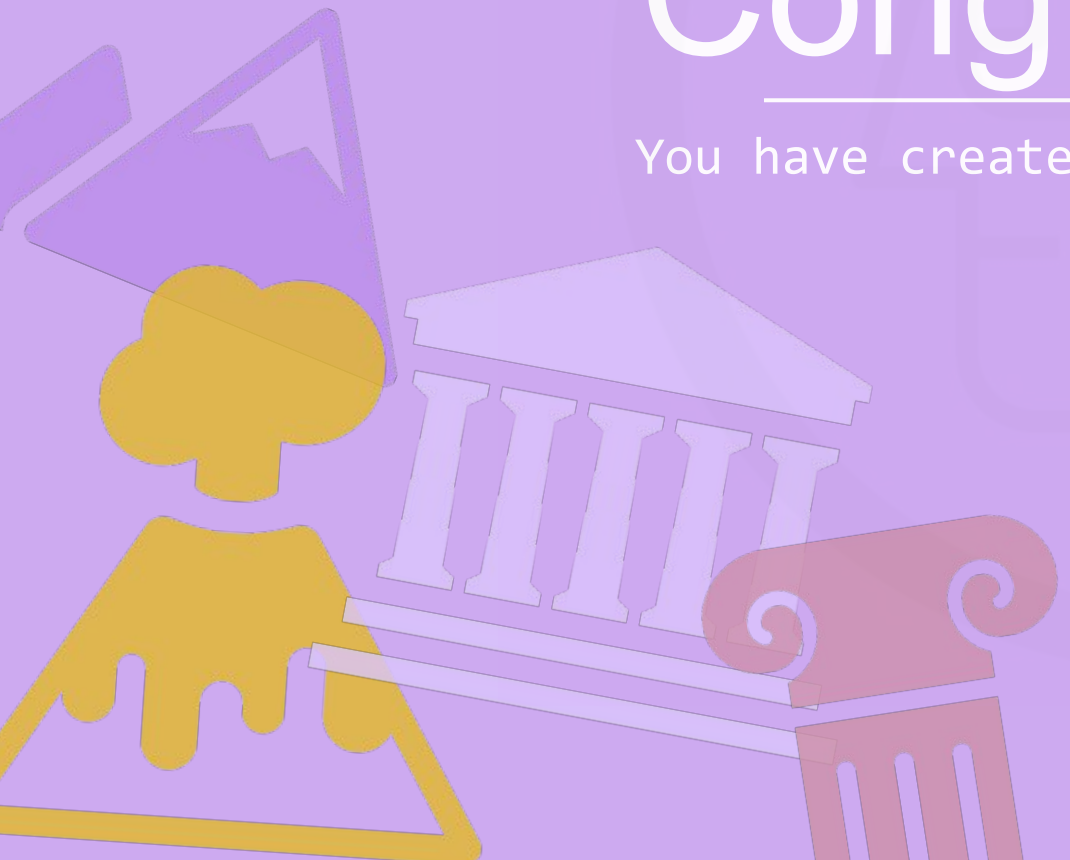

Congratulations!

You have created a disaster training course!

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