

The background features a vibrant gradient from deep blue at the top to bright orange and red at the bottom. It is decorated with numerous white stars of varying sizes and a network of thin, white, curved lines that create a sense of depth and movement, resembling a stylized celestial or digital space.

AP S106

MIDTERM REVIEW

RULES OF THE GAME

- **Must use button on the table to answer question verbally and explain your answer – you will be called on to answer by one of the instructors**
- **Must tell us which discipline you're in before you answer for points (we'll rely on the honour system)**
- **If you get the answer right, you pick the next category**
- **If you get the answer wrong, the next person whose hand is up can steal**
- **Everyone is here to learn and review for the midterm so be kind to everyone who answers!**

PANEL

STRANGER STRINGS	LOOP WARS	THE BOOLEAN IDENTITY	THE BATCODE RISES	MISSION DEBUGGING
\$250	\$250	\$250	\$250	\$250
\$500	\$500	\$500	\$500	\$500
\$1000	\$1000	\$1000	\$1000	\$1000

STRANGER STRINGS

"Because Python strings can hide secrets — just like Joyce's Christmas lights!"

WELCOME
TO
HAWKINS

➤ HAWKINS LAB EXPERIMENT · \$250

What is the output?

```
experiment_log = "SUBJECT ELEVEN – TELEKINESIS TEST"  
print(experiment_log[8:-19])
```

[Question board](#)

➤ DUSTIN'S SECRET TRANSMISSION · \$500

What is the output?

```
radio_signal = "Nobody normal ever accomplished anything meaningful in this world."  
radio_signal = radio_signal.lower()  
radio_signal = radio_signal.upper()  
radio_signal = radio_signal[15:4:-4]  
print(radio_signal)
```

[Question board](#)

➤ **NOT EVERYONE IS WHO THEY SEEM. \$1000**

What is the output?

```
# Vecna's identity test – Is this the real Vecna or an impostor?  
print("Vecna" > "VecNA")
```

```
# The Mind Flayer's disguise – Can you spot the difference?  
print("Mind~Flayer" < "Mind-Flayer")
```

Question board

A close-up, front-facing image of Darth Vader's helmet and upper torso. The helmet is black with a silver-colored breathing apparatus. The background is dark. The text "LOOP WARS" is overlaid on the lower part of the image.

LOOP WARS

May the Loops & Logic Be With You



➤ LOOPS OF THE SITH · \$250

Verbally explain what happens in the following piece of code:

```
sith_power = 10
dark_energy = 1

while sith_power > 0:
    dark_energy += sith_power # Absorbing more power
    sith_power = sith_power + 1 # Uh oh... the Dark Side is growing stronger

print(dark_energy)
```

[Question board](#)

➤ DESCENT INTO DARKNESS · \$500

Provide the print statement that will give this output?

```
sith_name = "VADER"  
i = 0  
  
while i < len(sith_name):  
    # print statement  
    i += 1
```

V

A

D

E

R

[Question board](#)

➤ BATTLE OF LOOPS: THE FILES OF FATE · \$250

What will the contents of the files look like?

```
file = open("battle_log.txt", "w")

power_level = 1
while power_level <= 5: # The battle continues for 5 rounds
    file.write(f"Round {power_level}: The Jedi and Sith clash!\n")
    power_level += 1 # Power grows

file.close()
```

A

```
1 Round 1: The Jedi and Sith clash!
2
3 Round 2: The Jedi and Sith clash!
4
5 Round 3: The Jedi and Sith clash!
6
7 Round 4: The Jedi and Sith clash!
8
9 Round 5: The Jedi and Sith clash!
10
```

B

```
1 Round 1: The Jedi and Sith clash!
2 Round 2: The Jedi and Sith clash!
3 Round 3: The Jedi and Sith clash!
4 Round 4: The Jedi and Sith clash!
5 Round 5: The Jedi and Sith clash!
6
```

C

```
1 Round 1: The Jedi and Sith clash!
2 Round 2: The Jedi and Sith clash!
3 Round 3: The Jedi and Sith clash!
4 Round 4: The Jedi and Sith clash!
5 Round 5: The Jedi and Sith clash!
```

D

```
1 Round 1: The Jedi and Sith clash!
2
3 Round 2: The Jedi and Sith clash!
4
5 Round 3: The Jedi and Sith clash!
6
7 Round 4: The Jedi and Sith clash!
8
9 Round 5: The Jedi and Sith clash!
```


A promotional image for the movie 'The Matrix'. It features Keanu Reeves as Neo and Laurence Fishburne as Morpheus. They are both wearing dark suits and sunglasses. Neo is in the foreground, looking directly at the camera. Morpheus is slightly behind him, holding a handgun. The background is a dark green space filled with vertical streaks of glowing green code, reminiscent of the 'Matrix rain' effect. The overall tone is mysterious and high-tech.

THE BOOLEAN IDENTITY

The difference between knowing the truth... and living a lie.

➤ THE PILL DILLEMA · \$250

What is the Output?

```
red_pill = 100  
blue_pill = 101  
print(red_pill and blue_pill)
```

[Question board](#)

➤ AGENT SMITH'S LOGIC TRAP. \$500

What is the Output?

```
neo_choice = 10
morpheus_signal = 25
if neo_choice**2 > 100 and morpheus_signal < 50:
    print("Welcome to the real world.")
```

[Question board](#)

➤ THE ONE CONDITION · \$1000

Which Boolean condition will evaluate True when matrix is equal to "real_world" or "illusion"?

- ☐ A. `matrix == "real_world" == "illusion"`
- ☐ B. `matrix = "real_world" or matrix = "illusion"`
- ☐ C. `matrix == "real_world" or matrix == "illusion"`
- ☐ D. `matrix = "real_world" and matrix = "illusion"`
- ☐ E. `matrix == "real_world" and matrix == "illusion"`

[Question board](#)

Every function needs structure—just like Gotham needs order.

A dramatic, low-angle shot of Batman standing in the center of a destroyed Gotham City. He is silhouetted against a bright, chaotic explosion or fire in the background. Debris is flying through the air, and the surrounding skyscrapers are dark and damaged. The overall tone is dark and gritty.

THE BATCODE RISES

➤ TRUE POWER OF THE DARK KNIGHT · \$250

What is the outcome of executing this code?

```
def dark_knight_power(num):  
    """The Dark Knight rises... to the power of 3."""  
    print(num**3)  
  
# The Dark Knight tests his might  
bat_signal1 = dark_knight_power(5)  
bat_signal2 = bat_signal1 + 1  
  
print(f"Gotham's power level: {bat_signal2}")
```

[Question board](#)

➤ THE DARK KNIGHT'S MORAL CODE · \$500

What is the Output?

```
def batman_or_joker(score):  
    if score > 90:  
        return "You're Batman."  
    elif score > 50:  
        return "You're Two-Face."  
    else:  
        return "You're Joker."  
  
print(batman_or_joker(85))
```

What is the correct output?

- [A] You're Two-Face.
- [B] You're Batman.
You're Two-Face.
- [C] You're Batman.
You're Two-Face.
You're Joker.
- [D] You're Two-Face.
You're Joker.

Question board

➤ WHERE IS HE?!- \$1000

Select the missing function body from the options below

```
def where_is_batman(city):  
    """Gotham needs to know where he is..."""  
    # Missing Function Body
```

```
bat_signal = where_is_batman('Gotham')
```

```
Gotham
```

```
print(bat_signal)
```

```
Gotham
```

Options

- [A] return city
print(city)
- [B] print(city)
- [C] print(city)
return city
- [D] return city

Question board



MISSION: DEBUGGING

Because every bug is a ticking time bomb....can you defuse it in time? ⌚💣

➤ OPERATION DIVIDE & FALL · \$250

Mission Briefing:

A critical operation was executing when a secret code was asked to divide by zero. The system crashes. Identify the **type of error** before the mission fails.

Question board

➤ UNDERCOVER SYNTAX · \$500

Will this code execute, or has it been sabotaged?

```
agent_status = 9  
print(agent_status / 3)
```

[Question board](#)

➤ THE DISAVOWED INPUT · \$1000

What kind of error is that?

A hacker inputs “ethanhunt” and receives the response
“Intruder Detected! Self-destruct in 5 seconds.”

```
access_code = input("Enter IMF override key:")  
if access_code == "EthanHunt":  
    print("Mission Authorized!")  
else:  
    print("Intruder Detected! Self-destruct in 5 seconds.")
```

Question board

A Na'vi warrior, likely Aang, is shown riding a banshee over a vast, blue ocean. The banshee's wings are spread wide, displaying a vibrant, iridescent pattern of colors. The warrior is holding a spear. In the background, there are lush, green mountains and a clear blue sky with some clouds. The text "FINAL JEOPARDY" is overlaid in large, white, 3D-style letters across the center of the image.

FINAL JEOPARDY



MASTERING THE OCEAN'S FLOW

On Pandora, water changes depending on the environment.

- At freezing temperatures, it becomes solid ice.
- When the temperature is normal, it flows gently.
- When it's too hot, it turns into steam.

Your task:

Determine the state of Pandora's water based on its temperature.

Write a function that determines whether Pandora's water is ice, liquid, or steam based on temperature.

[Question board](#)