



Qualifiers Round

Secondary Competition 2025

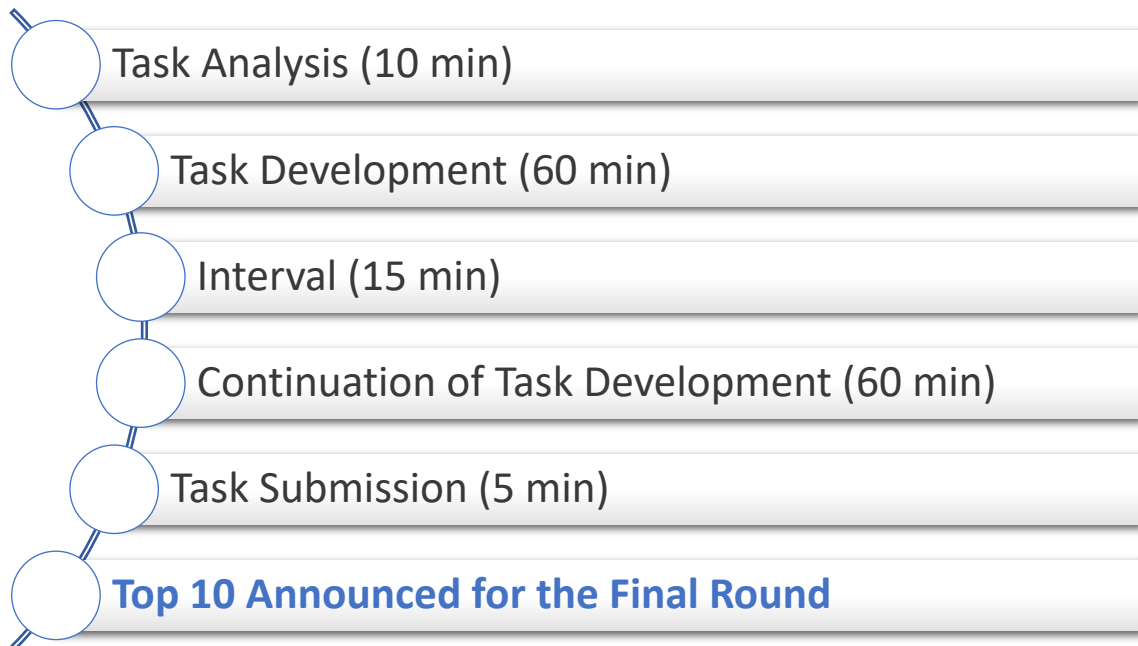


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Qualifier Round Schedule



The Hogwarts Coding Quest 🧙♂️

You have just received your acceptance letter to Hogwarts School of Witchcraft and Wizardry! Before you are fully admitted into the magical world, you must complete your first major challenge to prove your coding skills and defend yourself against magical creatures using your knowledge of Python spells! 🐍 🖥️



In this challenge, you will encounter a series of riddles and magical creatures, each with their own unique dangers. You must be wise, logical, and strategic; just like Harry Potter when he faced trolls, dragons, dementors, and all the dark forces at Hogwarts.

Stay sharp, think carefully, and code bravely.

The Wizarding World is counting on you! ✍️ ⚡

Functionality #1: Program initialisation

When running the program, it should:

1. Display the title 'The Hogwarts Coding Quest'.
 2. Ask the player for a Wizard Name, and a House Selection.
 3. The player should start with fifty (50) points and an empty inventory list.
- ⚡ The player's name should have a minimum of five (5) characters excluding empty spaces.
 - ⚡ The house selection must be one from the following: **Gryffindor**, **Slytherin**, **Ravenclaw**, or **Hufflepuff**.

Functionality #2: User Interface

Create an interface with the following menu options:

=== Hogwarts Main Menu ===

1. Explore the Forbidden Forest
2. Fight a Random Creature
3. Solve a Magical Riddle
4. View Status (Points, Inventory)
5. Exit the Adventure

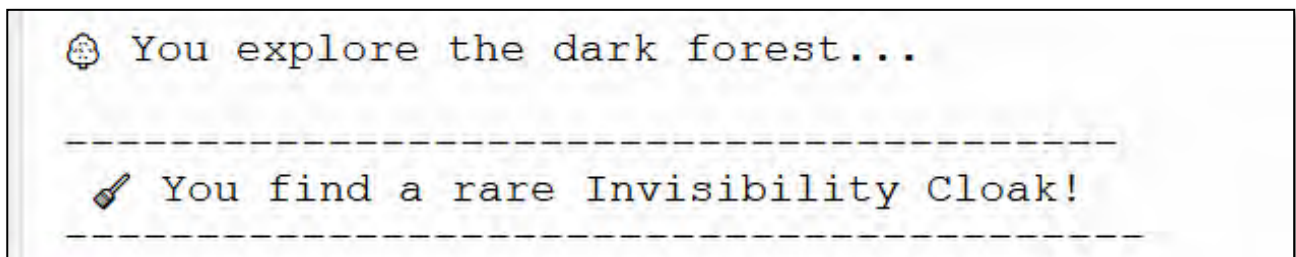
- ⚡ The game should end when the user chooses option 5 or when the points drop to 0 or less.
- ⚡ On every operation, the system should display clear and readable outputs, and meaningful feedback or error messages.

Functionality #3: Explore the Forbidden Forest 🌳

1. When the player explores the forbidden forest, a random event occurs:
 - 40% chance of being a magical artefact.
 - 35% chance of being attacked and lose 15 points.
 - 25% chance of gaining 20 points.
 2. Each magical artefact can be found only once and in a random order.
 3. Each magical artefact can be used only once.
 4. If all magical artefacts have been found, the random event occurs as follows:
 - 65% chance of being attacked and lose 15 points.
 - 35% chance to gaining 20 points.
- ⚡ The list of magical artefacts is provided in Table 1.

Artefact	Effect
Invisibility Cloak	Avoid damage in forest attacks.
Elder Wand	Auto-win a fight against a creature.
Time-Turner Locket	Provides another attempt in case of a wrong spell or a failed riddle.
Riddle Revealer	Get the answer for a Riddle.
Phoenix Feather	Auto-revive to 30 points if points reach 0.

Table 1: List of Magical Artefacts



Screenshot 1: Sample screenshot for Functionality 3

Functionality #4: Fight a random creature 🐉

This feature should:

1. Choose a creature at random, such as a Acromantula, Basilisk, Troll, and so on.
 2. Display the creature's name and description.
 3. Ask the player to choose a spell to defeat it:
 - If the spell is correct, the creature is defeated, and the player gains 30 points.
 - OR the player loses 20 points if the spell is wrong.
 4. If the player has the Elder Wand artefact in the inventory:
 - Prompt the player whether an auto-win is desired or not before asking for the spell.
 - Re-prompt in case the player's input is other than 'yes' or 'no'.
 5. If the player has the Time-Turner Locket artefact in the inventory, prompt the player whether to use it for another chance in case the player's spell was incorrect. Re-prompt in case the player's input is not yes or no.
- ⚡ The list of creatures, their descriptions and the spell required to defeat them is shown in Table 2.
- ⚡ Remember that magical artefacts can be used only once!

Creature	Description	Correct Spell <i>(link to Description)</i>
Acromantula	Huge hairy spider afraid of fire.	Incendio <i>(Create fire to scare spider)</i>
Basilisk	Gigantic serpent whose gaze is deadly.	Protego Totalum <i>(Total protection shield protects from gaze)</i>
Boggart	Takes the form of your worst fear to scare you.	Riddikulus <i>(Turns fear into something funny)</i>
Dementor	Dark creature that feeds on sadness & fear.	Expecto Patronum <i>(Summons a happy protector)</i>
Dragon	Massive flying beast that attacks with fire breath.	Aguamenti <i>(Water spell that counters fire)</i>
Grindylow	Vicious water demon with tentacle arms pulling you underwater.	Relashio <i>(Makes creature release you underwater)</i>
Inferius	Dead bodies controlled by dark magic, weak to light and fire.	Incendio <i>(Fire destroys them)</i>
Manticore	Deadly poisonous creature with a scorpion tail.	Everte Statum <i>(Blasts enemies backward to avoid poison sting)</i>
Troll	Giant, heavy, hard to control brute that smashes everything.	Petrificus Totalus <i>(Freezes entire body & stops brute force)</i>
Werewolf	Half-human, half-wolf that charges fast under the full moon.	Impedimenta <i>(Slows attacker and stops fast charges)</i>

Table 2: List of Creatures, Descriptions and Spells

```

👤 You encounter a Werewolf!
A human who transforms into a wolf during the full moon.

Do you want to use the Elder Wand for an auto-win? (yes/no): no
⚡ The Elder Wand is still in your inventory, but you chose not to use it.

Choose a spell to defeat it:
⚡ An empty spell won't do anything!

Choose a spell to defeat it: hello
❌ Wrong spell! The Werewolf is still alive. -20 points.
Your current points are: 30

```

Screenshot 2: Sample screenshot for Functionality 4

Functionality #5: Solve a Magical Riddle 🧠

This feature should:

1. Present a riddle at random from the ones listed in Table 3 below.
2. If the player has the Riddle Revealer artefact in the inventory:
 - Prompt the player whether to use it or not.
 - Re-prompt if the player's input is other than 'yes' or 'no'.
 - If the Riddle Reveal is used, the riddle is considered solved.
 - If the Riddle Reveal is not used, prompt the player to enter the answer.
3. The user will gain 25 points for inputting a correct answer or having used the Riddle Reveal artefact.
4. The user will lose 10 points for inputting an incorrect answer.
5. If the player has the Time-Turner Locket artefact in their inventory and the answer was incorrect:
 - Points are not deducted.
 - Prompt the player whether they would like to use it for another attempt.
 - Re-prompt if the player's input is anything other than 'yes' or 'no'.

⚡ The list of riddles and answers is shown in Table 3.

Riddle	Answer
I guard the truth, but you must be brave. Solve my puzzle or face the grave.	Sphinx
I open secrets with a single flick but use me wrongly and you're in a fix.	Alohomora
I may be small but I'm golden and fast. Catch me & victory is yours at last.	Golden Snitch
I slither without a sound, beware if I'm around.	Basilisk
I appear when fear is near. Cast your happiest thought, and I disappear.	Dementor
I walk among wizards but have no wand. Magic to me is strange & beyond.	Muggle

Table 3: List of Riddles and answers

```
🔮 Riddle:
I slither without a sound, beware if I'm around.
Answer >> sphinx

[X] Incorrect Answer!
You have the Time-Turner Locket in your inventory
Do you want to use it? [yes/no]>> yes

Answer >> basilisk

✅ Correct Answer! +25 points
💎 Current Points: 75
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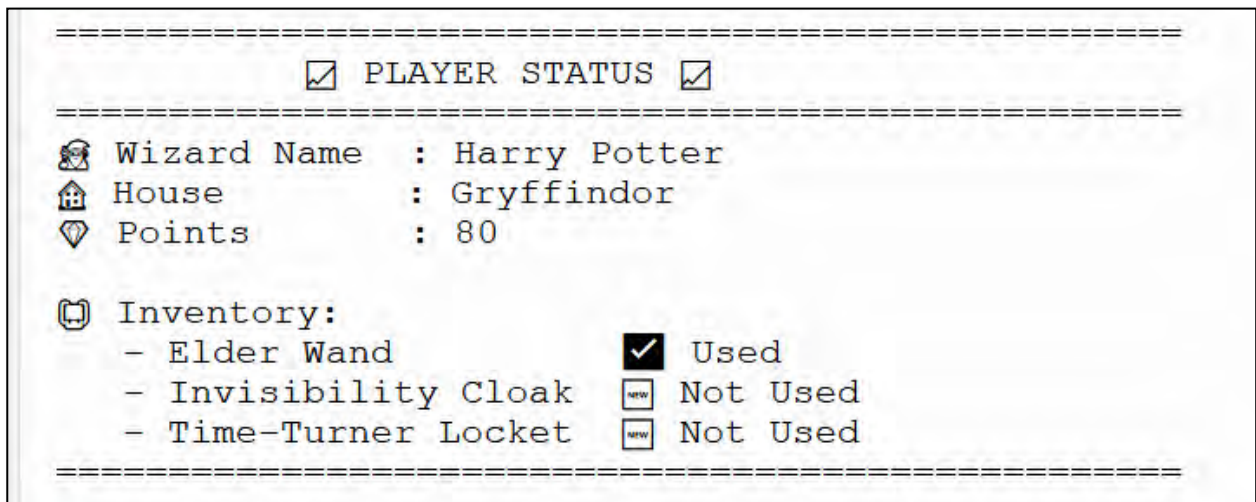
Screenshot 3: Sample screenshot for Functionality 5

Functionality #6: View Status

This feature should display:

- Wizard Name
- House
- Current Points
- Inventory items collected

⚡ For each inventory item, display whether it has been used or not!



Screenshot 4: Sample screenshot for Functionality 6

Functionality #7: Exit the Adventure

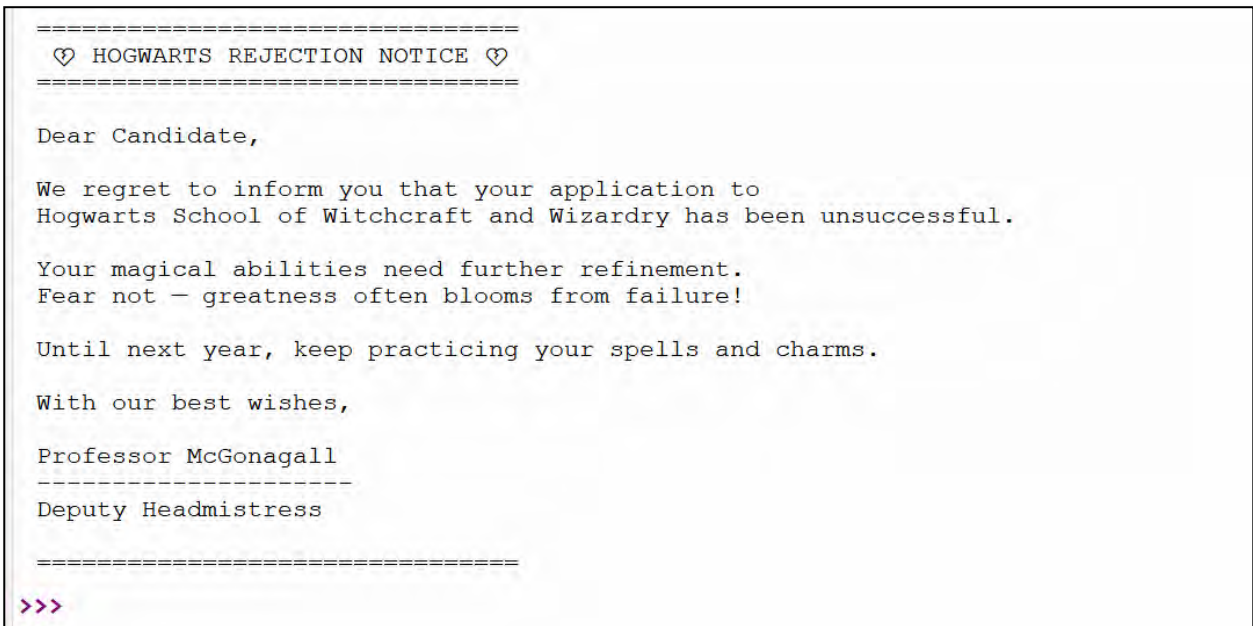
This feature should:

1. Display an outcome based on total points:
 - 1–50 points: "A humble start to your magical journey!"
 - 51–100 points: "A promising young wizard!"
 - 101+ points: "A LEGEND of Hogwarts!"
2. End the program.

Functionality #8: Hogwarts Rejection Notice

This feature should:

1. Display an appropriate message if the player's points reach 0.
2. End the program.



Screenshot 5: Sample screenshot for Functionality 8

Functionality #9: Validation Processes

In addition to the validation processes mentioned in the previous features,

1. Empty user input should be ignored and not treated as invalid or incorrect input. The program should re-prompt the user to enter the requested data/option.
2. All user inputs should be case-insensitive to improve usability and prevent errors due to case mismatches.
3. Prevent any runtime errors due to invalid user actions.

Functionality #10: Modular Programming

- Structure your code using user-defined functions.
- Use dictionaries, lists, and/or tuples where appropriate.
- Include comments and apply Python naming conventions.

🚩 Important Note:

For convenience, a Word document and a Text file containing the list of artefacts, creatures, and riddles will be shared by the invigilator via the Zoom chat panel at the start of the session.

Name your program **Hogwarts_name_surname.py**,
such as Hogwarts_john_abela.py

Assessment Rubric

Program Runs	User Friendly/Experience Interface		Proper use of Comments		Proper Conventions (Snake Case, meaningful var names etc.)		Suitable Prompts / Messages displayed		User Input		
Proper Filename	Arithmetic Operations (points)	Proper use of Data Structures		Modular Code		Code Efficiency		Display Rejection Notice		Other Functions /Flow	
Randomisation							Proper use of Artifacts (by user choice or auto-use)	Display Stats	Display Ending Message (by choice or Rejection)		
Forbidden Forest Random Event (when Magical Artefacts are still available)		Forbidden Forest Random Event (when Magical Artefacts are not available)		Creature Encounter		Magical Riddle					
Validations											
Ignore Empty Input	Main Menu Options	Wizard Name		House Name		Yes/No Requests		User Input Case Sensitivity		Avoid Runtime Errors	
0 – Not Satisfactorily 1- Partly Satisfactorily 2- Entirely Satisfactorily											
Maximum Score: 54 + 2 for every extra feature											

code sprint NATIONAL CONTEST COMPETITION MT

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