Lab 05 – Small game

Návrh a vývoj počítačových hier
Tvorba a dizajn počítačových hier

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20. 10. 2024

Idea Approval Deadline

**Send email with idea & team
to michalferko1@gmail.com**

Work on your projects!

OR!

Make a Small Game

Intro Task

- Good for students new to Unity
- No extra points for finishing

Challenge Task

- Good for students with Unity experience
- Finish by next week as a homework
- **2.5 EXTRA POINTS if done correctly**

Intro Task – Whack-a-Mole

- 3x3 grid with "moles"

- Each mole has a key assigned
  - Press the key to whack it – only when it's visible

- Hides and shows in random intervals

- Print score whenever you whack
  - even when you fail

- Bonuses: add assets
  - Show score on screen
  - Restart game
  - Show effects for whacking

Unity code

- **If you're lost, this should be all you need**

```
Start()

Update()

Time.time

Input.GetKeyDown(KeyCode.Space)

gameObject.SetActive()

GetComponent<ComponentType>().enabled = false;

Debug.Log()
```

https://docs.unity3d.com/ScriptReference/

Challenge Task – Ball in a Maze

- Create a 3D maze

- Your goal is to tilt the maze to get the ball to the finish
    - Control the maze with keys/mouse

- Add holes that end the level with a fail

- Restart the level (key press or when you fail)

- Add teleport – teleport the ball between two places in levels

- Add pickable objects that increase your score
    - show your score!

Intro Task – step-by-step

1. Create 3x3 grid with "moles"
   a) Make a game object, turn it into a prefab
   b) Drop 9 prefabs in the scene

2. Each mole has a key assigned
   a) Create a C# script, attach to the prefab
   b) Create a [SerializeField] KeyCode key;
   c) Set the whacking key for each instance in the scene
   d) Write an Update() function that waits for the key to be pressed – Input.GetKeyDown

3. Hides and shows in random intervals
   a) Change Update() to count time (e.g. using Time.time or Time.deltaTime)
   b) Set MeshRenderer enabled to true or false based on current time

4. Print score whenever you whack – even when you fail
   a) Make a Score C# script that is referenced by all moles (or make a static score field)
   b) Update the score when any key is pressed (plus or minus)
   c) Use Debug.Log to print the score to the console