

2024

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W E L C O M E T O

# THE LITTLE PRINCESS

Game presented by SI4-FISA

BERDNYK Mariia

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DELILLE Axel

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THE LITTLE *Princess*

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GAMING PRESENTATION

# INTRODUCTION



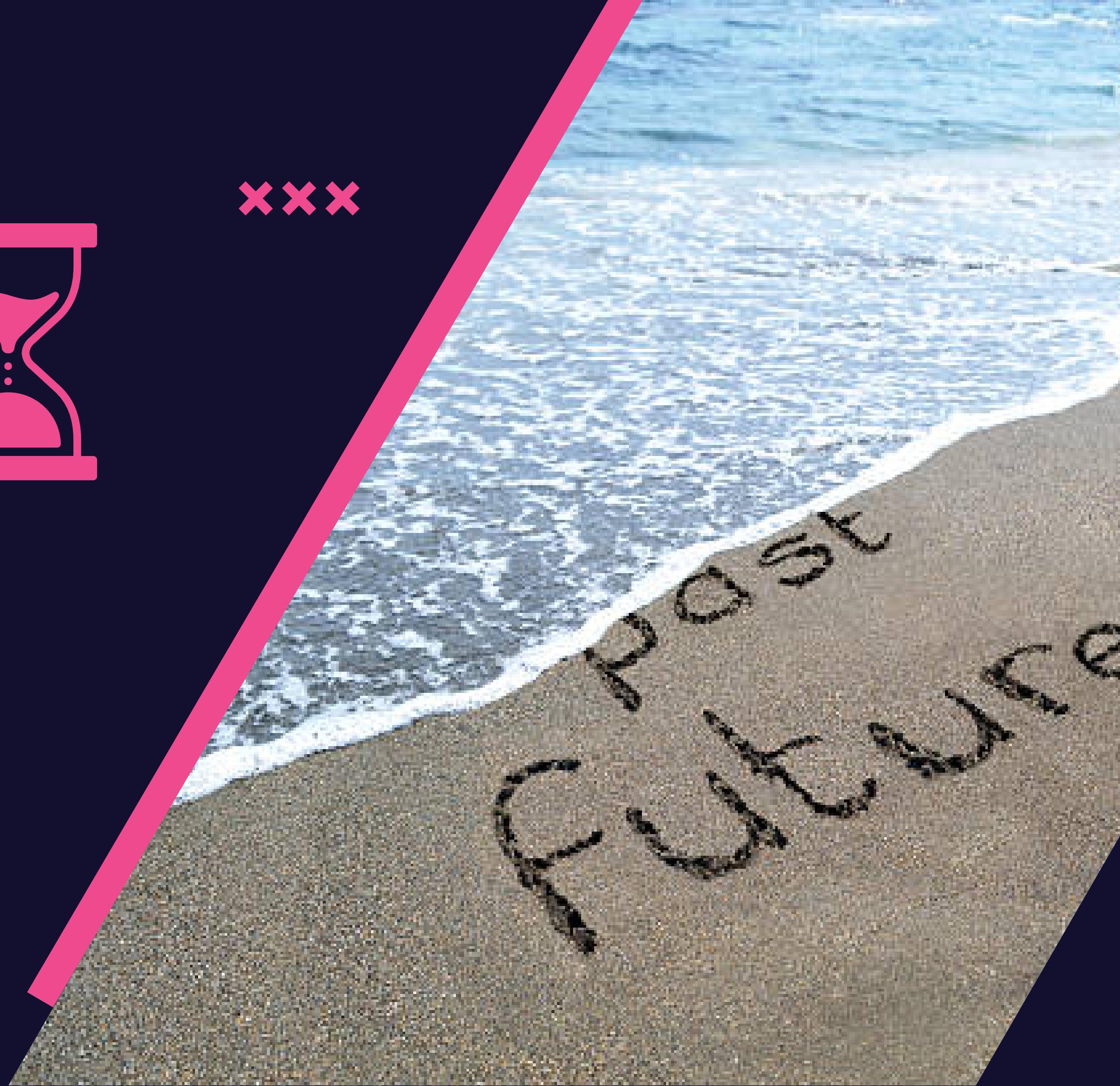
1

**Arya - the princess of  
the asteroid EIEIIH8**

2

**Storyline :**

- Past = planet #1
- Present = planet #2
- Future = planet #3



## GAME PRESENTATION

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# WORK DISTRIBUTION AND DETAILED PLAN

**Menu: Tu**

- 09.04 - 10.04

**Transition to planet 2:****Tu**

- 01.04 - 07.04

**Transition to Planet 3:****Mariia**

- 25.03 - 31.03 - The skeleton of transition
- 01.04 - 07.04 - Details and scenario for transition

**Planet 1: Tu**

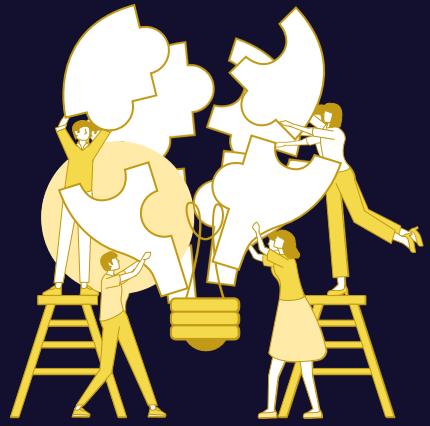
- Setup environment 26.02 - 01.03
- Character animation 01.03 - 08.03
- Blender import 09.03 - 24.03
- Other details 24.03 - 08.04

**Planet 2: Axel**

- Car physics 26.02 - 09.03
- AI Behavior 10.03 - 17.03
- Level design 18.03 - 20.03
- UI features 21.03 - 24.03
- Bug fixes 25.03 - 03.04
- Advanced AI (fail) 04.04 - 09.04

**Planet 3: Mariia & Edgar -****Start 26.02 - 03.03**

- 26.02 - 03.03 - Load predefined data from CSV and Weather REST-API calls - Mariia
- 04.03-12.03 - Addition of Earth texture and coordinate calculation
- 13.03-24.03 - Addition of statistics and graph
- 26.03-08.04 - bug fixes and UI improvement



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GAMING PRESENTATION

# #1 THE MUSEUM OF FORM AND MOTION

Purpose: Show the past of the Earth

Planet #1 = Past

Navigating through the evolution of  
the strange planet up until this point



Follow the spirit  
*The last spirit shall show you  
the way*

# WHAT WE DID



## Planet #1

Tu

### Dialogue System



Interactive dialogues with different characters



### Dynamic Camera

Camera following player & creatures



### Blender Export

Succeeded to export all Blender models with animations



### Other small details

Sound effect, animation, visual effects, splines, ....

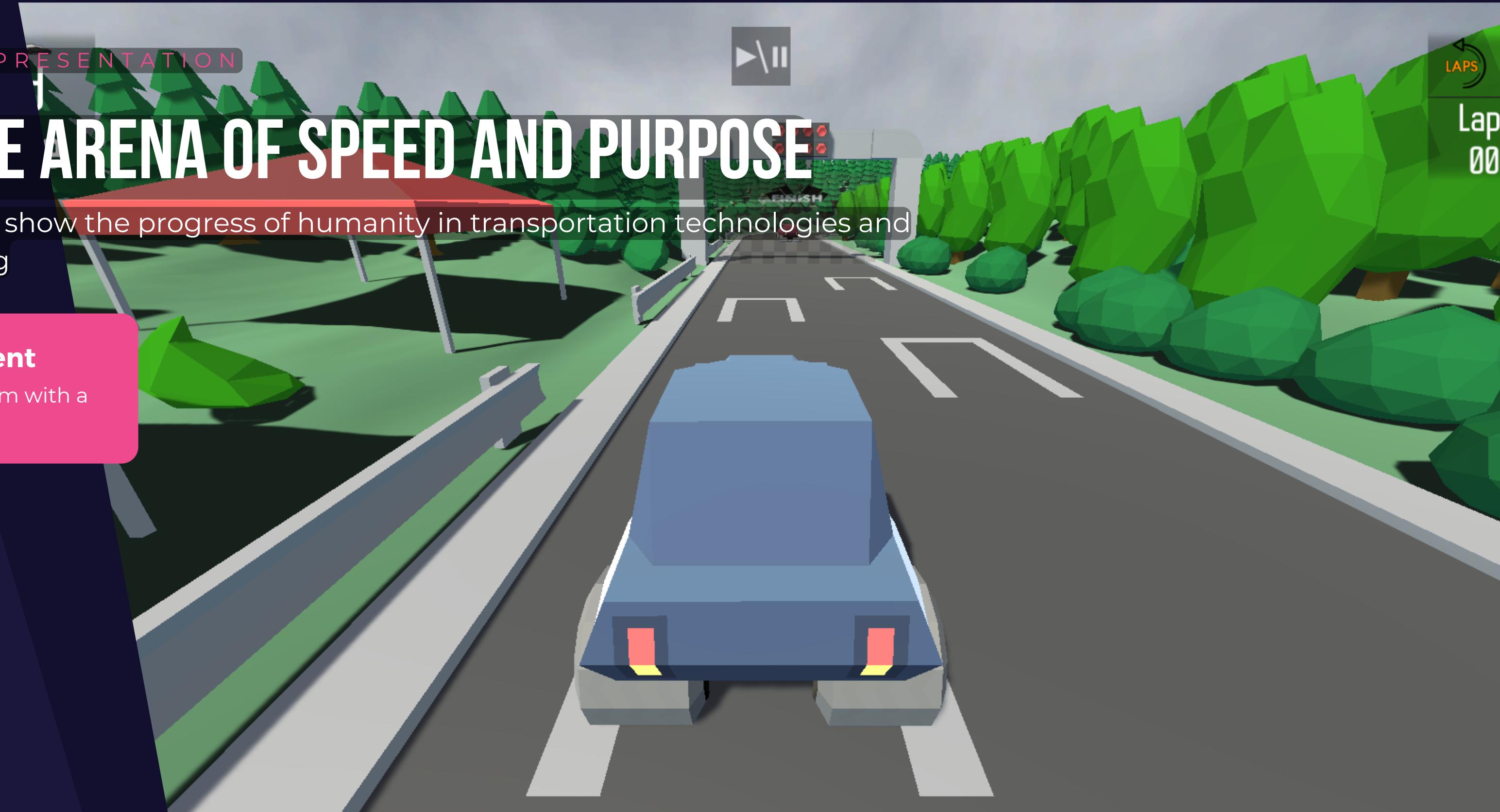
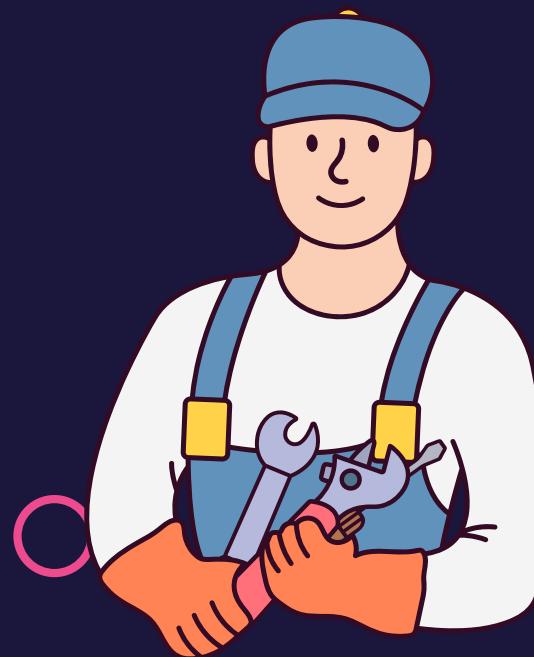
GAMING PRESENTATION

## #2 THE ARENA OF SPEED AND PURPOSE

Purpose: to show the progress of humanity in transportation technologies and engineering

### Planet #2 = Present

The real modern race system with a mechanic as local!



# COMPLEMENTARY INFORMATION

Points implemented, main challenges

## Planet #2

Axel

### Car physics



#### Usage of wheel collider :

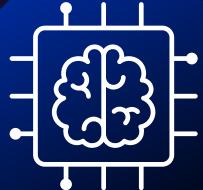
- Script from TD
- Insight from external asset

### UI



Modification of an existing UI taken from unity asset store.

### AI Behavior



- Logic from TD
- Additional behavior with collision (velocity below threshold for detection)



### Miscellaneous

Sound effect, animation, visual effects (a mix between TD and external assets)

GAMING PRESENTATION

## #3 REAL-TIME 3D WEATHER CHANNEL

Purpose: to show the pressing problem of humanity - the climate change

Planet #3 = Future

The real time 3D weather channel!



# COMPLEMENTARY INFORMATION

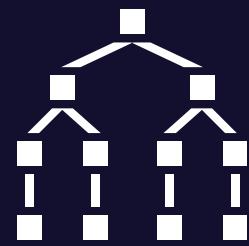
Points implemented, main challenges



## Planet #3

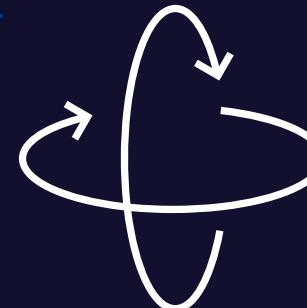
Mariia & Edgar

### PROBLEM SOLVED:



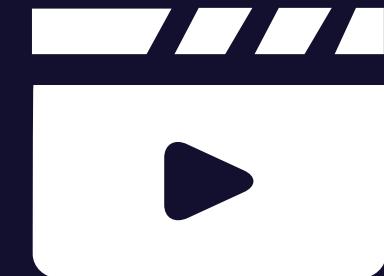
#### KDTree

- from international programming challenge 2022



#### Calculation

- Rotation of the object on sphere
- 3D coordinates (X, Y, Z) into 2D coordinates (lat & lon)



#### Animation

- VideoPlayer animation of weather conditions

### CHALLENGES:



#### HTTP & REST API calls

- Free API
- JSON parsing in Unity
- Too many HTTP calls



#### Display on Earth

- Math calculations (2D to 3D)
- VideoPlayer and animation



#### OnClick trigger

- Second time click event did not work (we still don't know how)

# EXTERNAL RESSOURCES

Unity assets store, sketchfab3D

## PLANET 1 :

Models:

1. [Princess Arya](#)
2. [Him/TheOne](#)
3. [Infinian](#)
4. [Fairy](#)
5. [Drugdör The Golem](#)

6. [Tornado](#)
7. [Night Mushrooms](#)

8. [Tarisland](#)

9. [Lily Paddler](#)

10. [Dilophosaurus](#)

11. [Chocobo](#)

12. [TerrorBird](#)

Unity store :

1. [Dreamteck Splines](#)
2. [Particle Pack](#)
3. [Fantasy Skybox FREE](#)
4. [Rocky Hills Environment](#)

## PLANET 2 :

Unity store :

1. [Tiny Low Poly Cars](#) (car assets)
2. [Racing Starter Kit](#) (assets and ui script) \*

\* This was also used to **debug** car physic script but we didn't just take it from the asset.

## TRANSITION TO PLANET 2 (OPTIONAL):

Unity store (only models):

1. [SimplePoly City](#)
2. [BOX-02 Robot](#)

SketchFab (models):

Unity store (only model):

1. [Earth model](#)
2. [Dialog system](#)
3. [Bubble Font \(Free Version\)](#)
4. [KdTree, NGeoNames, CSV parser](#)
5. [XCharts](#)

## TRANSITION TO PLANET 3 (OPTIONAL):

Unity store (only models):

1. [Animated Gas Planet](#) (+animation)
2. [Street Sign Pack](#)
3. [Sci-Fi music](#)
4. [SpaceSkies Free](#)
5. [Modular Sci-Fi Corridor](#)

SketchFab (models):

Alarm light, Book, Holo Globe, Paper, ice staircase, sci-fi table, Sci-Fi High Tech Computer Lowpoly, Sci-Fi Side Table & Monitors

THANK YOU  
FOR YOUR ATTENTION

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