



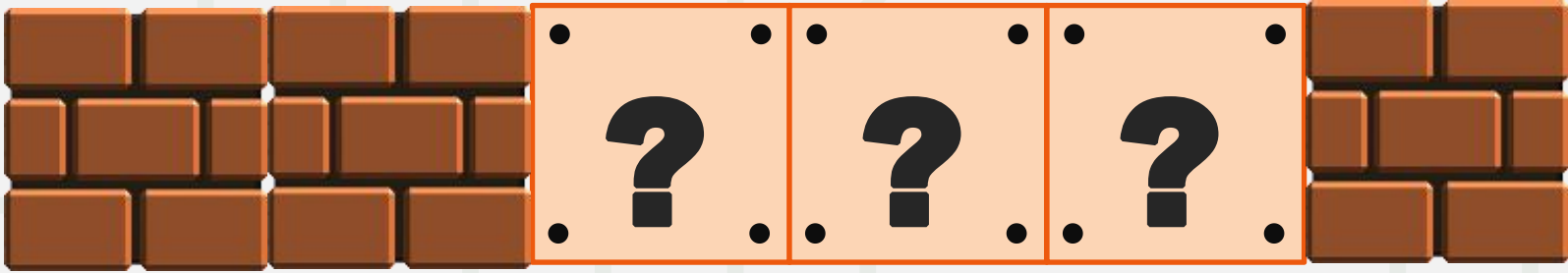


Team Members:

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Zhaohui Liang	21012755

The slide features a Super Mario Bros. theme. At the top, a green and yellow checkered pattern transitions into a grey and white geometric design. Below this, a large black sign with a white border and a white shadow is suspended by a silver ring and a white cord. The sign has the text "Project Presentation" in white. To the left of the sign is Mario, wearing his red cap and blue overalls, holding a pink box. To the right is Luigi, wearing his green cap and blue overalls. The background is a green checkered floor with green bushes and clouds. In the center, there are two question mark blocks and a blue block with the Hebei University of Technology logo. The logo is a yellow circle with a blue border and the text "河北工业大学" and "HEBEI UNIVERSITY OF TECHNOLOGY".

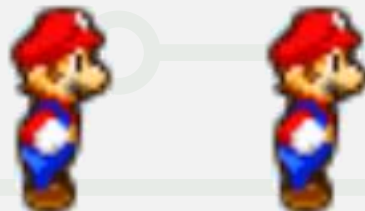
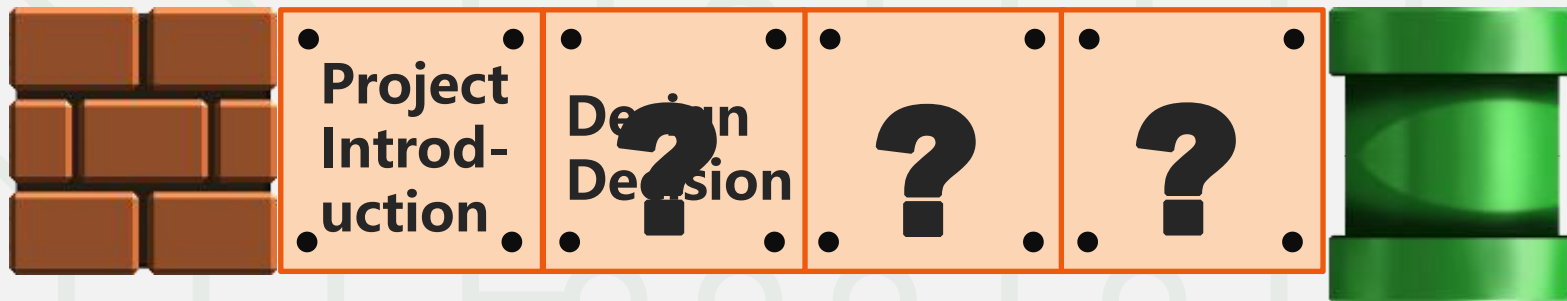
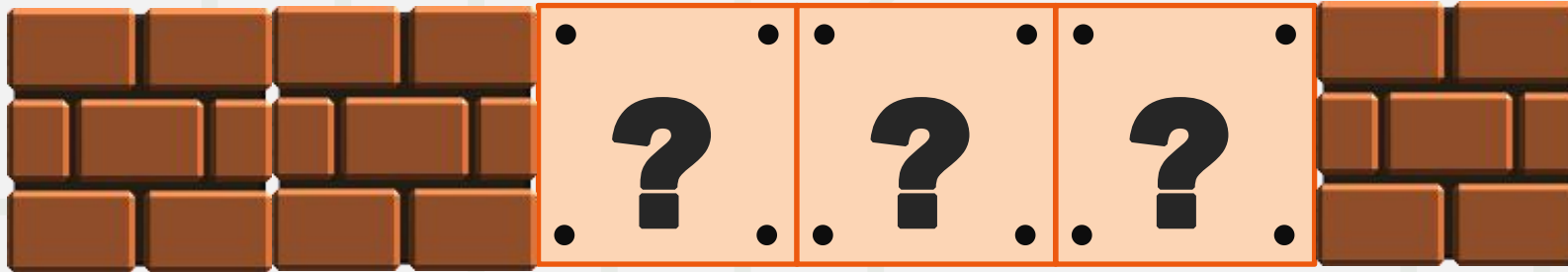
Project Presentation

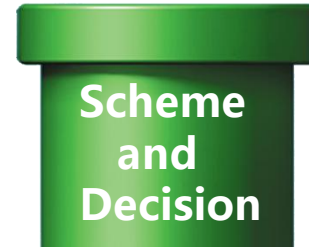
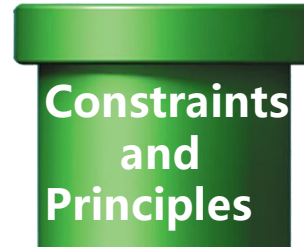
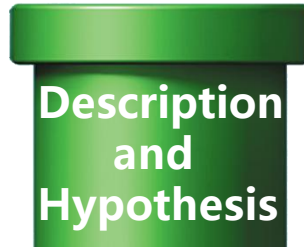
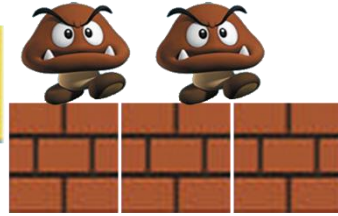
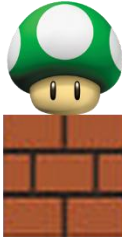
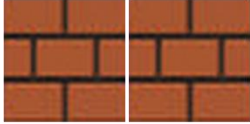
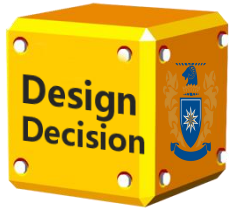




A Super Mario game. We tried to highly restore the Super Mario game animation and mode that we are familiar with, but made some changes in the game architecture and engine selection, made some changes in the level structure of the game.







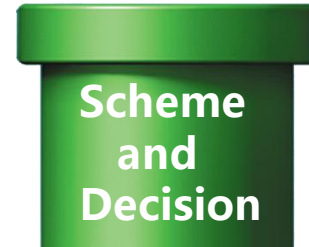
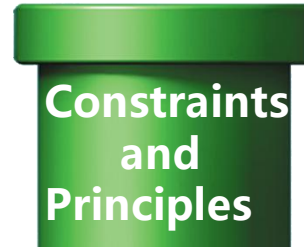
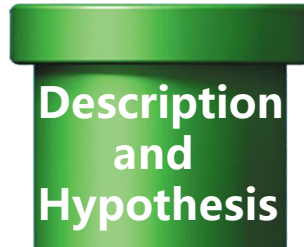
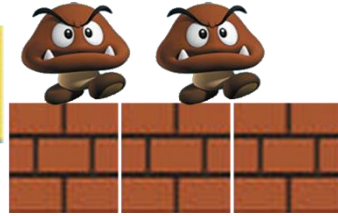
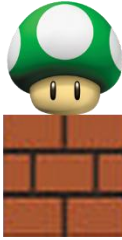
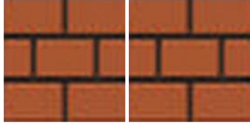


Description

- Highly restore Super Mario and make changes to the level arrangement;
- Complete analysis of game development details, add our understanding and ideas.

Hypothesis

- As a qualification for mission completion, we only need to implement some maps and some items and effects;
- Assume we can implement other similar features smoothly.



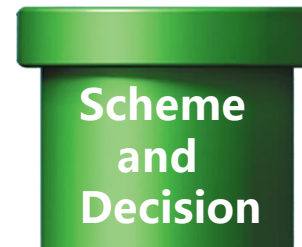
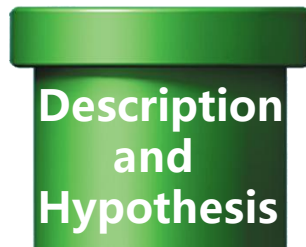


Constraints

- Time constraints: The project begins on May 15, 2023 and is expected to have 3 weeks to complete the project;
- Business constraints: Need to ensure the integrity of the experience, prioritize the completion of the level, and add special effects and items appropriately.

Principles

- Select the appropriate game engine;
- Schedule the project based on the completion of the game details.



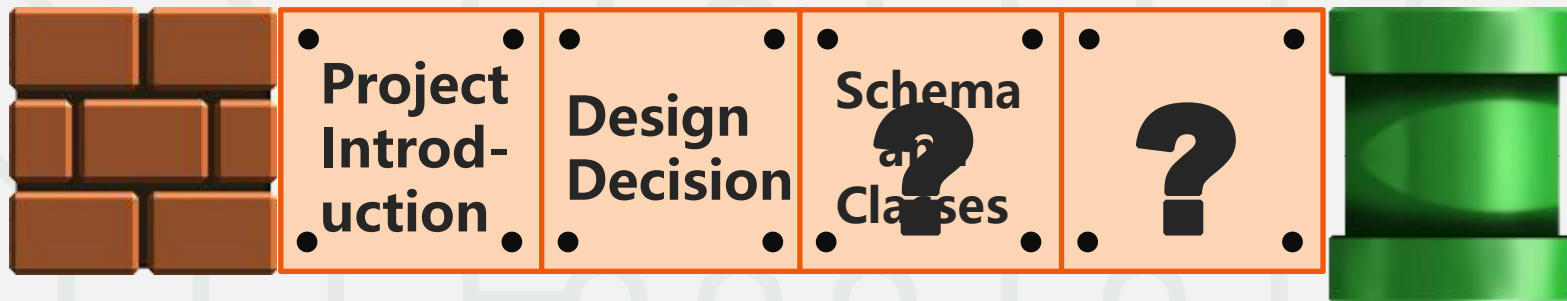
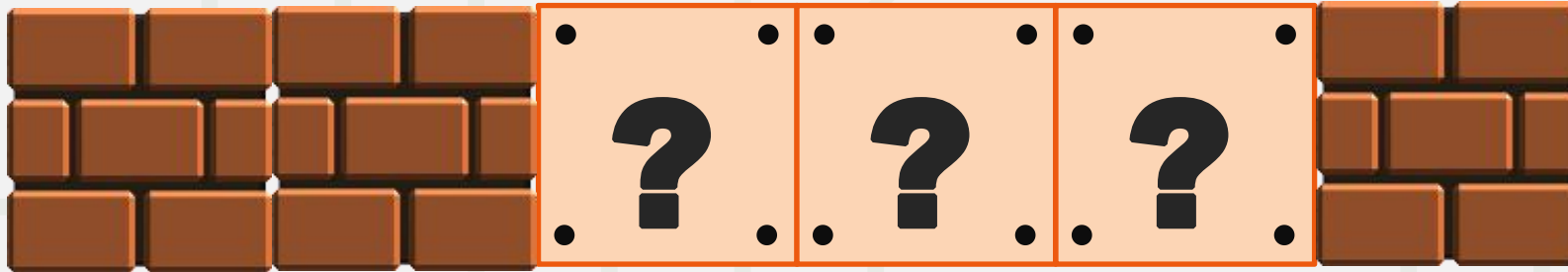


Scheme

- Option 1: Select litiengine engine to load the game;
- Option 2: Select libgdx engine to load the game;

Decision

Option 2 is a better choice, as libgdx provides lots of documents we can learn the engine quickly, and we only plan to finish the game design on windows at the moment.





Graphics Classes

InterMapObj, Enemy, Item

InterMapObj contains the graphics classes that make up the map, such as Brick, Coin, and Flag.

InterMapObj	
InterMapObj(InGameScreen, MapObject)	
bounds	Rectangle
mapObject	MapObject
fixture	Fixture
screen	InGameScreen
world	World
map	TiledMap
body	Body
onHit(Mario)	void
setCategoryFilter(short)	void
getTiledMapTileLayerCell()	Cell

Brick	
Brick(InGameScreen, MapObject)	
onHit(Mario)	void

Coin	
Coin(InGameScreen, MapObject)	
tileSet	TiledMapTileSet
BLANK_COIN	int
BLANK_COIN_MAP1	int
BLANK_COIN_MAP2	int
onHit(Mario)	void

Flag	
Flag(InGameScreen, MapObject)	
x	float
doorX	float
onHit(Mario)	void

Enemy includes small monsters that move around the game, including Turtle and Goomba.

Enemy	
Enemy(InGameScreen, float, float)	
world	World
body	Body
screen	InGameScreen
velocity	Vector2
update(float)	void
onHit(Mario)	void
reverseVelocity(boolean, boolean)	void
createEnemy()	void
getBody()	Body
onEnemyHit(Enemy)	void
defFixtureDef(FixtureDef)	void

Turtle	
Turtle(InGameScreen, float, float)	
stateTime	float
KICK_RIGHT_SPEED	int
deadRotationDegrees	float
currentState	TurtleState
previousState	TurtleState
walkAnimation	Animation<TextureRegion>
KICK_LEFT_SPEED	int
isSetToDestroy	boolean
shell	TextureRegion
frames	Array<TextureRegion>
isDestroyed	boolean
draw(Batch)	void
createEnemy()	void
onHit(Mario)	void
killed()	void
getCurrentState()	TurtleState
update(float)	void
createHead(FixtureDef)	void
onEnemyHit(Enemy)	void
getFrame(float)	TextureRegion
kick(int)	void

Goomba	
Goomba(InGameScreen, float, float)	
isDestroyed	boolean
walkAnimation	Animation
isSetToDestroy	boolean
stateTime	float
createHead(FixtureDef)	void
onEnemyHit(Enemy)	void
update(float)	void
draw(Batch)	void
onHit(Mario)	void

The Item contains other items in the map, such as a Mushroom that can be eaten by Mario.

Item	
Item(InGameScreen, float, float)	
isDestroyed	boolean
velocity	Vector2
toDestroy	boolean
world	World
screen	InGameScreen
body	Body
defineItem()	void
reverseVelocity(boolean, boolean)	void
destroy()	void
draw(Batch)	void
update(float)	void
use(Mario)	void

Mushroom	
Mushroom(InGameScreen, float, float)	
update(float)	void
use(Mario)	void
defineItem()	void



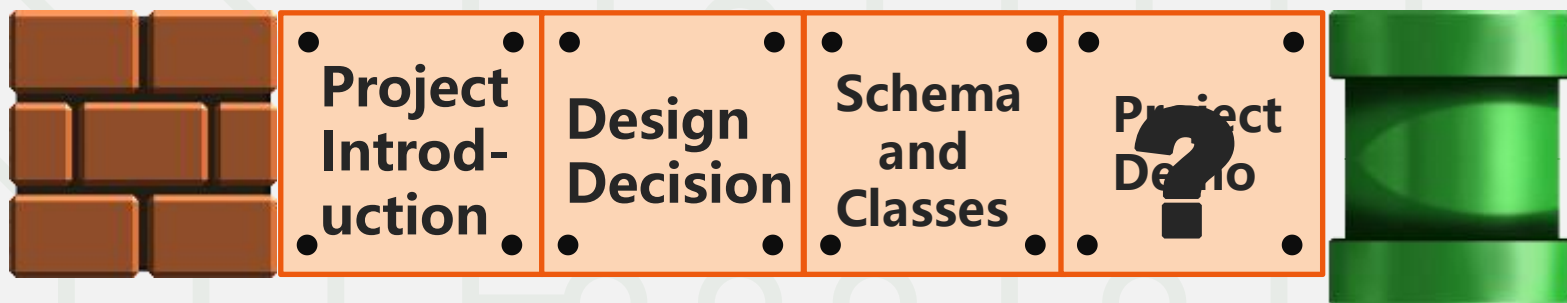
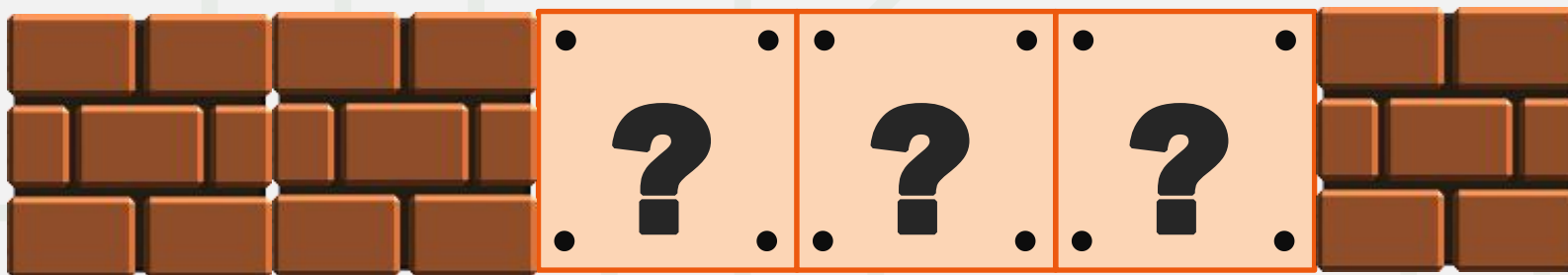
WorldContactListener		
WorldContactListener ()		
beginContact (Contact)		void
preSolve (Contact, Manifold)		void
postSolve (Contact, ContactImpulse)		void
endContact (Contact)		void

WorldCreator		
WorldCreator (InGameScreen)		
turtles		Array<Turtle>
goombas		Array<Goomba>
createGroundObjects (World, TiledMap)		void
createGoombaEnemies (InGameScreen, TiledMap)		void
createTurtleEnemies (InGameScreen, TiledMap)		void
createCoinObjects (InGameScreen, TiledMap)		void
createBrickObjects (InGameScreen, TiledMap)		void
getEnemies ()		Array<Enemy>
createPipeObjects (World, TiledMap)		void
createFlagObjects (InGameScreen, TiledMap)		void

The above mentioned three graphics classes, they are through:

- WorldContactListener: makes them interact.
- WorldCreator : makes them generate on the map.







File Edit View Navigate Code Refactor Build Run Tools Git Window Help Mario [E:\桌面\课程F\261\A2\Mario] - DesktopLauncher.java [Mario.desktop.main]

Mario > desktop > src > org > mario > DesktopLauncher > main

Project: Mario (E:\桌面\课程F\261\A2\Mario)

- .github
- .gradle
- .idea
- assets [main] resource
- core
 - build
 - src [main] source
 - org.mario
 - hud
 - listener
 - object
 - sprites
 - utils
 - Game
- build.gradle
- desktop
 - build
 - src [main] source
 - org.mario
- gradle
- .gitignore
- build.gradle
- gradle.properties
- gradlew

Run: Mario:desktop[:de] ✓ Mario:desktop[:de]

Structure Bookmarks

OBS 27.2.4 (64-bit, windows) - 配置文件: 未命名 - 场景: 未命名

文件(E) 编辑(E) 视图(V) 停靠窗口(D) 配置文件(P) 场景集合(S) 工具(T) 帮助(H)

场景: 未选择源

来源: 显示器采集

混音器: 麦克风/Aux (0.0 dB), 桌面音频 (0.0 dB)

转场特效: 渐变, 时长: 300 ms

控件: 开始推流, 停止录制, 启动虚拟摄像机, 工作室模式, 设置, 退出

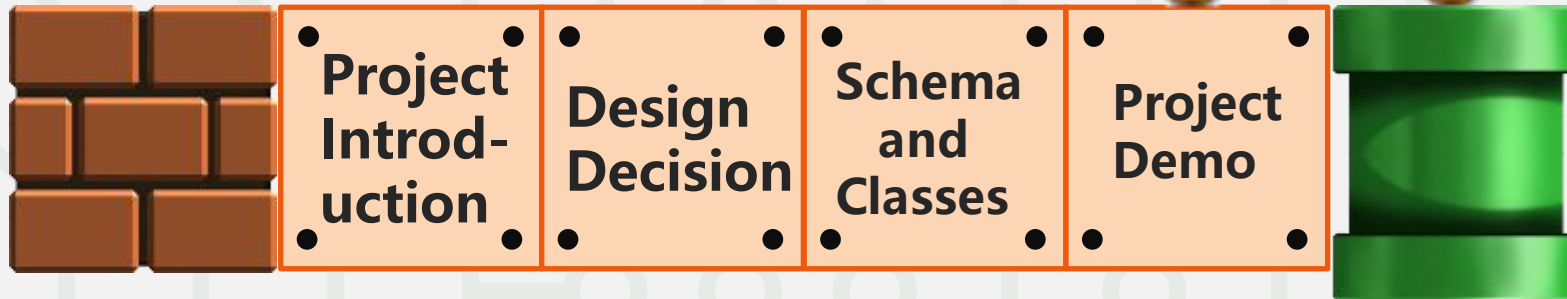
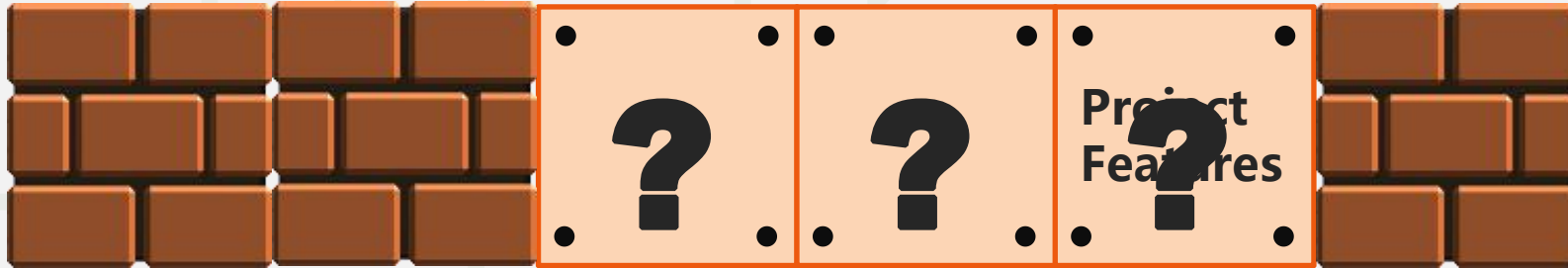
保存录像到 'E:\桌面\2023-06-04 12-42-56.mkv'

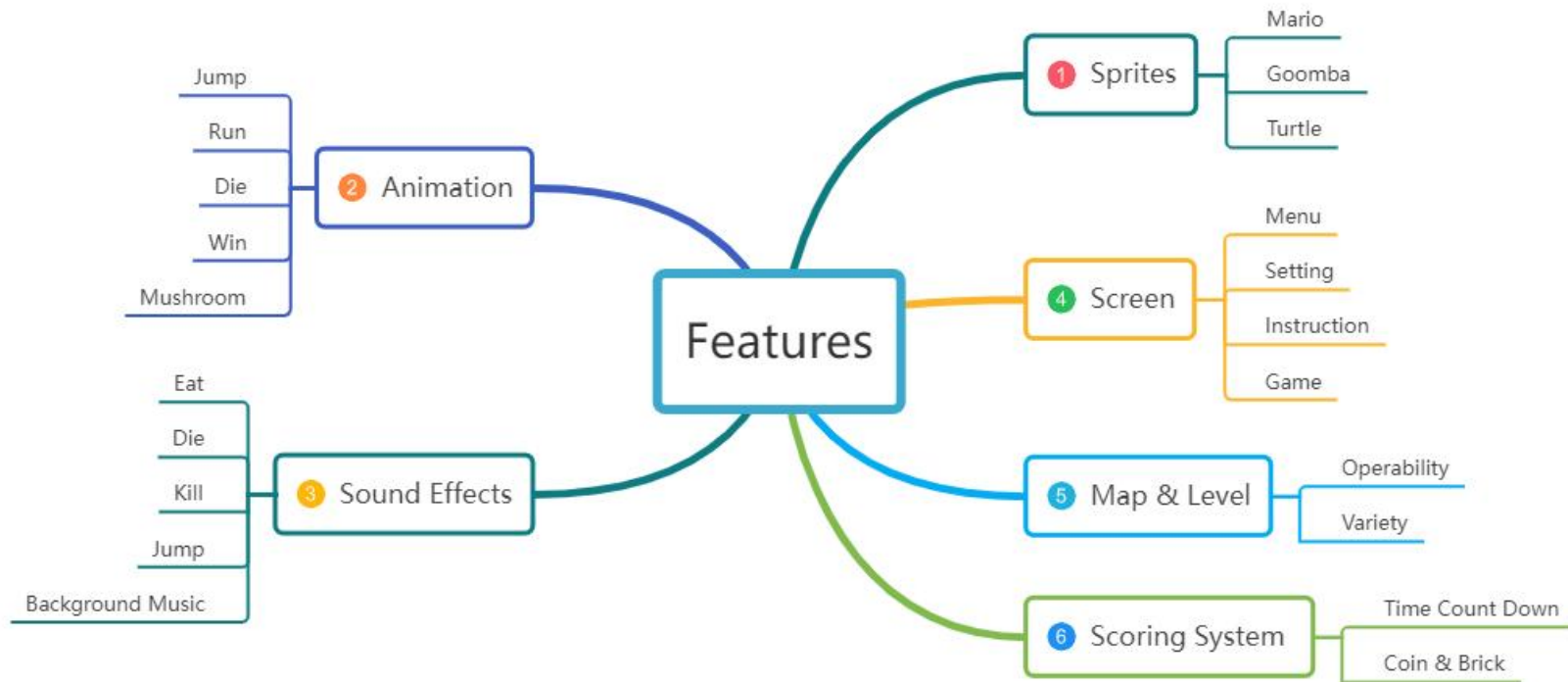
[[LIVE]] 00:00:00 ● REC: 00:00:00 CPU: 2.3%, 60.00 fps

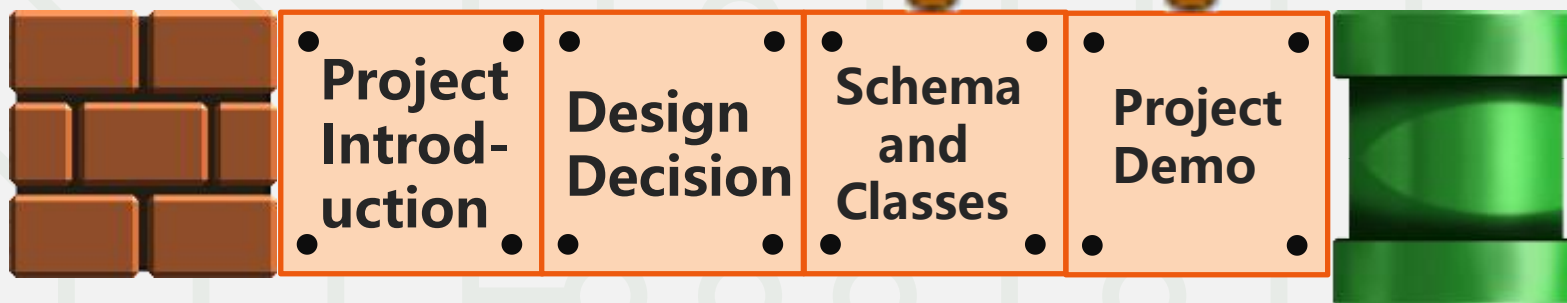
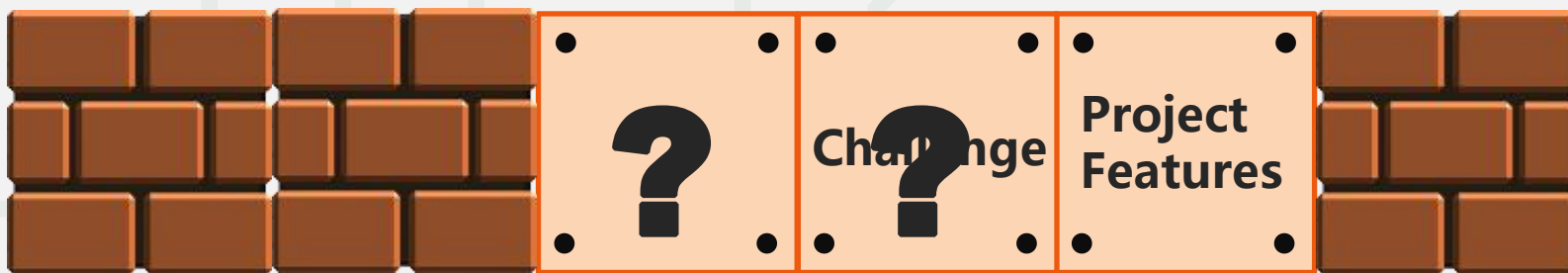
Git Run TODO Problems Profiler Terminal MetricsTree Dependencies

Localized IntelliJ IDEA 2021.3.1 is available // Switch and restart (today 10:20)

21:1 CRLF UTF-8 4 spaces main



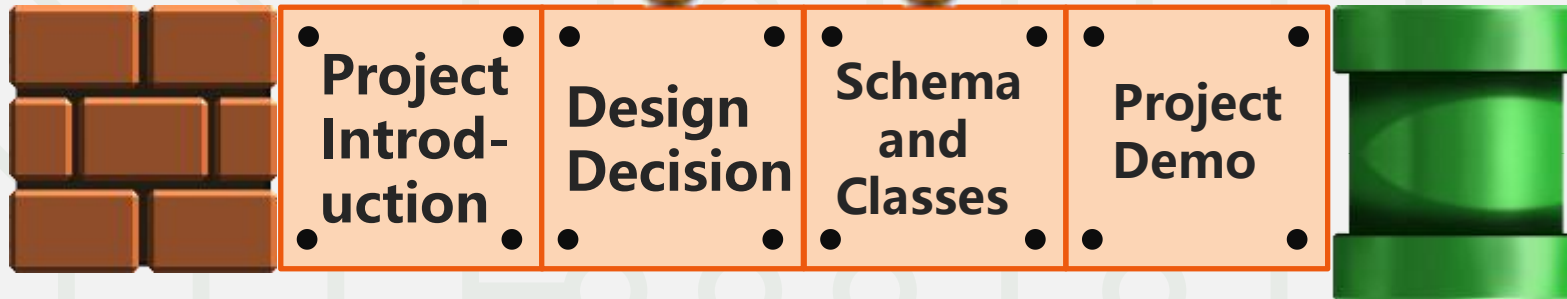
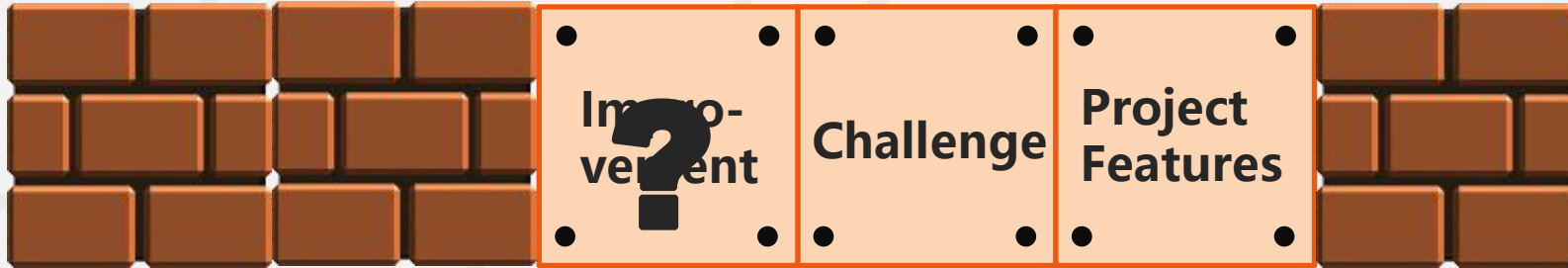






- Collision detection: Implement collision detection between player and game world.
- Player controls: Designing player controls is a challenge, especially in jumping.
- Animation Implement: Implement the animation like mushroom can be difficult.







Add store-provided items to the bonus, so that gold can be put to use.



Complete map details like coins, flags, hidden maps and items.



Add more maps, different Mario forms and improved monster difficulty.



Add some simple story and dynamic background to make the game fun.



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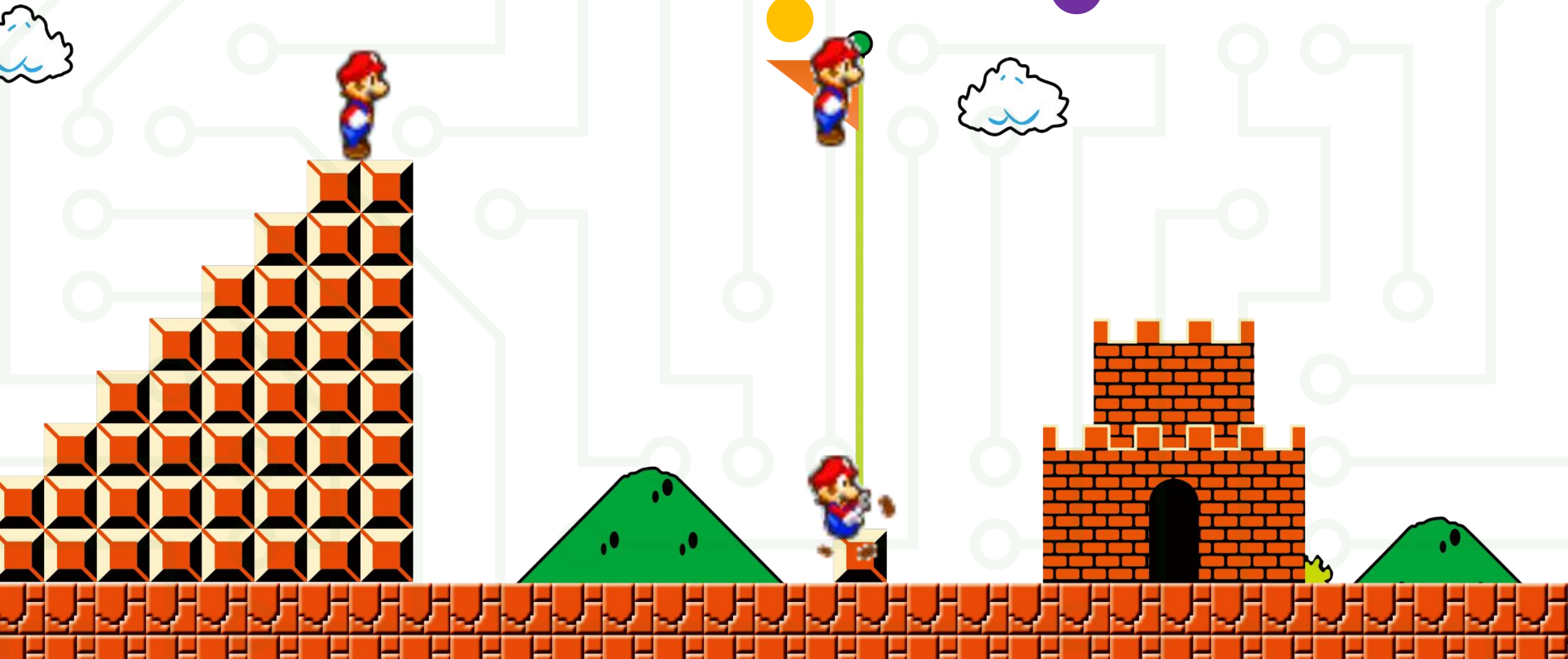
Add some simple story and dynamic background to make the game fun.



THE END



THANKS





· 注意 · 事项 ·	· 经费 · 预算 ·	· 人员 · 分工 ·	· 活动 · 流程 ·	· 活动 · 对象 ·	
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	· 活动 · 主题 ·	· 活动 · 目的 ·	· 活动 · 时间 ·	· 活动 · 地点 ·	

