KODLUYORUZ

OFON EKOSİSTEM rollic tiplay

Mobile Game Bootcamp Syllabus

Hyper-casual 101

- Numbers Of Hyper-casual Games
- Understanding Hyper-casual Games With Current Audience Data's
    - Target Groups / Users / Regions
- Target Kpi's & Some Important Keywords Of Hyper-casual Games
    - Campaigns
        - Cpc, Cpi, Ctr, Cpm, Etc.
    - Games
        - Retention, Session Time, Play Time, Etc.

Mobile Game Design

- Basic Design Principles
- Interactive Design Principles
- Designing Hyper-casual Games As A Product
    - Ideation
        - Analyzing Methods
        - Trend Tracking / Mining / Benchmark
            - The Best Websites For Ideation Phase
                - Idea / Art / Design: Dribbble, Behance, Reddit, Itch.Io, Artstation, Sketchfab Etc.
                - Game Data's: Sensortower Etc.
                - Others: Storeglide Etc.
    - Game Design: The Structure Of Games
        - Gid / Gdd For Hyper-casual Games
        - Basic Game Design Principles
            - Core Loop Of Games
            - Core Gameplay Mechanics & Dynamics & Rules
            - Levels & Progressions & Game Modes
            - Level Based: Core Levels, Bonus Levels, Boss Levels Etc.
                - Endless / Survival
                - Challenges / Matches
            - Extras / Metas
                - Tutorial/Onboarding, Store, Achievements, Leaderboard, Gift Box, Chest Room Etc.
        - Game Design Tricks For Hyper-casual Games
            - Bullets For Better Game Design Decisions
                - Hyper-casual Games Data's
                - Recommended Playtime Per Level & Progression
                - Importance Of Tracking User Interactions

                - Most Common Mistakes
                - Etc.
            - The Effects Of Monetization On Game Design
            - Requirements & Priorities For Testing Phases
                - The Effect Of Limited Time Development Sprints On Game Design Decisions
                - Etc.
    - Game Art Creation Phase
        - Game Art Decisions
            - Color Theory
            - Art Styles & Visual Languages
                - Low Poly Art, Pixel/Voxel Art, Vector Art Etc.
            - Basic Ui Principles
                - Design Decisions Between Different Ui Scenes / Layers
                - Using Animations For More Focus & Hierarchy
            - Most Common Visual Design Mistakes & Decisions
                - Using Incorrect Button Styles & Placements
                - Using Unnecessary Scroll Views
                - Etc.
        - Game Asset Optimization Tricks
            - 2d Texture / Ui Asset Tricks & Limits
                - Texture Compression (X4 Rules)
            - 3d Asset Tricks & Limits
        - Suggestions For A Better Visual Design In Unity
            - Shadow & Lighting Tricks
            - Shaders & Materials
        - Asset Store Kullanımı
    - Store Visuals Creation
        - The Importance Of Icon Design & Store Visuals

Mobile Game Development (C# Programming And Unity)

- C# 101
    - Data Types, Variables Types (Integer, Float, String, Boolean, List, Arrays, Dictionaries)
    - Loops (For, While)
    - Conditions
    - Function
    - Ienumeratos
    - Classes
        - Using A Class: Constructor
        - Using A Class: Properties
        - Using A Class: Methods
    - Interfaces
    - Extension Classes
    - Abstract Classes
    - Polymorphism

- Object-oriented Concepts
    - Defining Classes
    - Creating And Using Classes
    - Defining Functions
    - Accessing Game Objects
    - Constructor And Property Functions
    - Events
    - Solid Principles, Kiss
- **GIT**
- **Design Patterns(Observer(Event- Based Programming), Command, Singleton, MVC)**
- Unity 19.04 LTS
    - The Introduction
        - Engine Concepts
        - Development Tools
        - Ide Basics
        - Unity Concepts
        - Unity Production Basics: Lighting, Materials,
        - Effects, Etc.
        - Sprites And Game Objects
        - Scriptable Objects
        - Adressables
        - Unity's Component System
        - Scripts As Components
        - Using Simple Designs
        - Prefabs
        - Execution Order (Https://Docs.Unity3d.Com/Manual/Executionorder.Html)
    - **Naming Convention (Folder Structure, 3rd Party Layout, Layout))**
    - **How To Read Unity Documentation?**
    - Simple Movement And Input (3d Platformer Controller)
        - Simple Movement
        - Simple Rotation And Scaling
        - Easy Input Handling In Unity
        - Movement Types(Dotween, Moveto, Force, Animation)
    - Physics Components
        - Rigidbody Components
        - Unity Colliders
        - Physics Materials
        - Scripting Collision Events
    - Primitive Data And Math
        - Data Types And Variables
        - Mathematical Operations
        - Variable Scope And Access
        - Displaying Data
    - Decisions And Flow Control
        - Logical Expressions (Booleans)
        - “If/Else” Statements

        - "Switch" Statements
        - Timers
        - Move That Game Object
        - Spawning Teddies
        - Tagged Destruction
    - Organizing Game Objects
        - Parent-child Objects
        - Sorting Layers
        - Tagging Game Objects
        - Collision Layers
        - Organizing At Runtime
    - Unity Input
        - Touch
        - Mouse
        - Keyboard
        - Accelerometer
        - New Input System
    - User Interfaces
        - Unity Buttons
        - Other Ui Controls
        - Ui Design Concepts
        - Designing Ui For All Screen Sizes (Responsive)
    - Managing Game Objects
        - Creating And Destroying Objects
        - Activating And Deactivating Objects
        - Controlling Object Lifespans With
        - Invoke
    - Exceptions And Debugging
        - Run-time Exceptions
        - Finding Run-time Errors
        - Using The Debugger
    - Animation
        - Simple Unity Animation
        - Animator States
        - Scripting Animations
        - Animation Event
    - Unity Media Adding
        - Image Files
        - Sound Files
            - Adding Sounds To Game Objects
            - Scripting Sounds
    - Multiple Scenes
        - Creating New Scenes
        - Scripting Scene Changes
        - Saving Objects Across Scenes
        - Additive Scenes
    - Optimizasyon
        - Object Pooling

        - Type Of Shaders
        - Draw Calls (What? Why? How To Reduce?)(Show A Little Blender Before?)
        - Occlusion Culling
        - Static Objects
        - Finds And Gets
        - Physics (When To Avoid, Alternatives)
        - Structure
        - Gpu Bound Cpu Bound
        - Balancing Cpu And Gpu Commands
        - Garbage Collection
        - Reading Profiler
    - Artificial Intelligence
        - Navmesh
        - Runtime Navmesh
        - Custom Path Finding
        - State Machine (Timers And Probability)
    - Advenced User Interfaces
    - Particle Effects
    - Publishing Games
        - Working with Sdk (Unity)
        - Data Management
        - APIs Used for Advertising
        - Output to Different Platforms. (Android, Ios)
        - Cloud Build
    - Extending Editor Making Tools
    - Generally Accepted 3rd Party Uses(Leantouch, Photon, Dotween,Unirx,Odin)

**** Her Hafta Bir Proje Yapılacak.***

Kaynaklar:

- https://www.csforallteachers.org/system/files/unity_game_programming_planner_syllabus.pdf
- https://canvas.disabroad.org/courses/1843/assignments/syllabus
- https://www.coursera.org/learn/introduction-programming-unity
- https://www.coursera.org/learn/more-programming-unity
- https://static1.squarespace.com/static/5429ab2be4b0bc226325e671/t/5807c22ce6f2e12a8fcf439b/1476903469488/game+development+and+design+course+syllabus.pdf

Ek: Kod Stilleri

- https://www.dofactory.com/reference/csharp-coding-standards

Müfredat oluşturulmasında emeği olan eğitmenlerimize sonsuz teşekkürler:
Buğra Süslü, Candaş Demirel, Hakan Fatih Kalkan, Halil Coşgun, Uğurtan Erkazan, Melih, Kazım Pampal, Mert Ulunehir