CreationCamp

SAULT STE. MARIE INNOVATION CENTRE

Canada FedNor

To Register for the July 14th / 15th workshop – click here

Game Design & Development

CreationCamp teaches students how to create apps, video games, technological innovations & digital creative content through project-based learning.
creationcamp.io
twitter.com/CreationCampHam

Program Overview

CreationCamp will teach grade 9-12 students the coding, innovation, creativity and design-thinking skills necessary to create video games in Construct 3, a powerful professional game engine. Students will work with real world game and software development experts on hands-on projects to demonstrate new skills in software and game development skills.

Program Offering - Wednesday, July 14th & Thursday, July 15th

- 2 x 3hr sessions
- 9am – 12pm both days
- Registration is for a 2-day workshop that will cover a broad range of topics. Attendance at Day 1 is a prerequisite for Day 2

The program is delivered 100% virtually through live sessions. Students will be instructed by developers and game designers with real world experience. Students have the opportunity to talk to instructors and ask about their game and software development experiences and career paths. Classes will consist mainly of hands-on development workshops following brief presentations.

This workshop is brought to you by the Sault Ste Marie Innovation Centre (SSMIC) and through FedNor funding to develop technology talent in the Algoma Region.

Course Breakdown

Introduction to Game Development and Construct 3

Students are introduced to the instructors and an overview of the program. A brief intro to prototyping is presented, then students apply their knowledge with a beginner-friendly hands-on coding activity. Students have the opportunity to ask questions and conversate with instructors about their game and software development experiences. Provide online examples of platformers for students to play. In groups, allow them to discuss what works and what doesn't. Students should then work towards filling out a design template and finding the resources they need to fulfill their design.

Dynamic Levels

Following a brief introduction to the activity, students participate in a hands-on coding workshop, learning and demonstrating an ability to start a project and how to import, create and program objects to behave as they should in a platformer.

Design and Programming Lab: Implementing Design I

Students are given a basic project to build from. They will work on implementing a number of aesthetic and mechanical updates that make the player character more fun to control. Instructors bring their expertise to explain the design thinking process and support the students in their coding. Guide students towards adding a moving platform and a box that the player can push and jump on top of. Introduce the event sheet and the relationships between conditions and outcomes. Guide students towards adding a moving platform and a box that the player can push and jump on top of. Introduce the event sheet and the relationships between conditions and outcomes

Enemies and Game-overs

Guide students towards adding an enemy and providing different options for enemy mechanics. Students should decide between patrol and chase mechanics. Students will add an animated health bar as well as end conditions including a victory and game over screen. Refer to lesson: Enemies and Game-overs.

Learning Outcomes

- How to get started on a project
- How to navigate the menus
- Important Features
- Layout vs Event Sheet
- Importing Resources
- Manipulating the Layout
    - Objects
    - Properties
    - Behaviours
    - Sprites
    - Physics and control variables
    - Camera
- Introduction to the event sheet.
    - Conditions and Outcomes
    - Control and Movement
    - Physics and Interaction
    - Adding dynamic elements
- Moving:
    - Platforms
    - Enemies
    - Items
    - Hitboxes and collision
- Image Editing and manipulation
    - Core activity principles remain consistent henceforth.
    - How to change the size and scale of images
    - How to recolour images
    - How to add custom images
- Using events to manipulate the playspace
    - Creating enemies
    - Lose conditions.
    - Collisions
    - Enemy movement
    - Tracking
    - Patrol
    - Damage Mechanics
    - Health bar
    - Animated
    - Gameover Screen
    - Display
    - Transition
    - Restart keys

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