

iCreate - Generative Design in Virtual Reality

Members:

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iCreate - Setting Up OneNote

The screenshot shows the OneNote application window titled "Biography - OneNote". The ribbon includes "File", "Home", "Insert", "Draw", "History", "Review", and "View". The "capstone 2017" notebook is open, with tabs for "General", "Fall", "Winter", and "Spring". The main content area displays the page title "Biography" and the timestamp "Friday, September 22, 2017 17:14". On the right side, the "Add Page" menu is open, showing a search bar and a list of page titles: "Biography", "Valuable Information", and "Documentation".

The screenshot shows the OneNote application window titled "Week 1 - OneNote". The ribbon and notebook tabs are identical to the previous screenshot. The main content area displays the page title "Week 1" and the timestamp "Friday, September 22, 2017 17:15". Below the title, there are three columns of text: "Plans:", "Problems", and "Progress". At the bottom left, the text "Summary:" is visible. On the right side, the "Add Page" menu is open, showing a search bar and a list of page titles from "Week 1" to "Week 10".



iCreate - Written Biography

- Future Self
- Close to Retirement
- Career and Highlights
- Third Person Perspective
- Achievements and Accomplishments



iCreate - Resumes

- Basic Resume
- Brought and Peer Reviewed in Class
- Alternative:
 - Curriculum Vitae (CV)



iCreate - Project Preferences

- Online Database
- Top 5 Project Picks
- Reasons Why Description Possibility
- One Person Don't Want to Work With Possibility
- Talking with Clients Beforehand Possibility



iCreate - Receive Capstone Group

- Client:

Dr. Raffaele De Amicis (RdA)
Research Professor of the College of EECS

- TA:

Beham (Ben) Saeedi

- Members:

Hannah Solorzano
Rhea Mae Edwards
Nabeel Shariff



iCreate - Contact Client

Email and bio:

- raffaele.deamicis@oregonstate.edu
- <http://eecs.oregonstate.edu/people/de-amicis-raffaele>



iCreate - Weekly Meeting Times

- Client Meeting Time:
9AM → 4PM on Mondays
- TA Meeting Time:
1:30PM - 2:00PM on Tuesdays

iCreate - Problem Statement, Individual Works

- Individually Done
- Own Views
- Problem Definition
- Proposed Solution
- Performance Metrics



iCreate - Problem Statement, Final Draft

- Group Work Document
- Problem Definition
- Proposed Solution
- Performance Metrics



iCreate - “Under Promise, Over Deliver”

During week 4, the team met with Dr. Amicis and talked about an exercise to ease us into 3D development for VR. The exercise was to generate a roman water aqueduct via code, and we were asked by when we could deliver.

The TA suggested the best thing to do is to underpromise, and overdeliver. So the team thought three weeks would be sufficient for this task.

Additionally the team also completed the first team assignment which was the iCreate problem statement,



iCreate - Aqueduct Implementation

For the purposes of getting into 3D development in VR, our client Dr. Raffaele De Amicis asked us to write code that could generate a 3D roman water aqueduct made from individual 3D bricks.

The team was able to successfully finish code that could generate several pillars, but forming the arch was challenge and is still incomplete.



iCreate - User Requirements Document

The user requirements document (SRS) details iCreate's specific requirements needed to be fulfilled to complete the project.

After integrating feedback from the instructors, client, and TA, the team was able to produce an excellent version of the iCreate SRS.



iCreate - Technology Review and Implementation Plan (Rhea Mae)

- Headsets
 - HTC Vive*
 - Oculus Rift
 - Playstation VR
- Programming Languages
 - C#*
 - C/C++
 - Java
- Connective Software
 - Dynamo
 - Grasshopper - Iris VR
 - LeapMotion



iCreate - Technology Review and Implementation Plan (Hannah)

- Development Environment
 - Unity*
 - Unreal Engine
 - OpenGL
- Graphics Card
 - GeForce GTX 970
 - NVIDIA TITAN Xp
 - AKiTiO Node Thunderbolt 3
- User Controls
 - Oculus Rift Touch Controllers
 - Hands
 - Sony Controllers



iCreate - Technology Review and Implementation Plan (Nabeel)

User Interface

- Non-diegetic UI
- Spatial UI
- Diegetic UI

Operating System

- Microsoft Windows
- Apple Macintosh
- Linux

Distribution Methods

- Steam Store
- Oculus Home
- Executable File

The tech review document served to look at the different components that go into developing iCreate, and choosing a technology for each component that best fit the project.



iCreate - Design Document

- Group Work Document
- Individually → Group
- Combining Technology Review and Implementation Plan documents



iCreate - Client Meetings

Possible Additional Slide

Only complete with additional time



iCreate - TA Meetings

Possible Additional Slide

Only complete with additional time



iCreate - Individual Experiences (Rhea Mae)

Possible Additional Slide

Only complete with additional time



iCreate - Individual Experiences (Hannah)

Possible Additional Slide

Only complete with additional time



iCreate - Individual Experiences (Nabeel)

Possible Additional Slide

Only complete with additional time