

Team Practical Course on AR and VR Research

03 – Research with the Vivian Framework



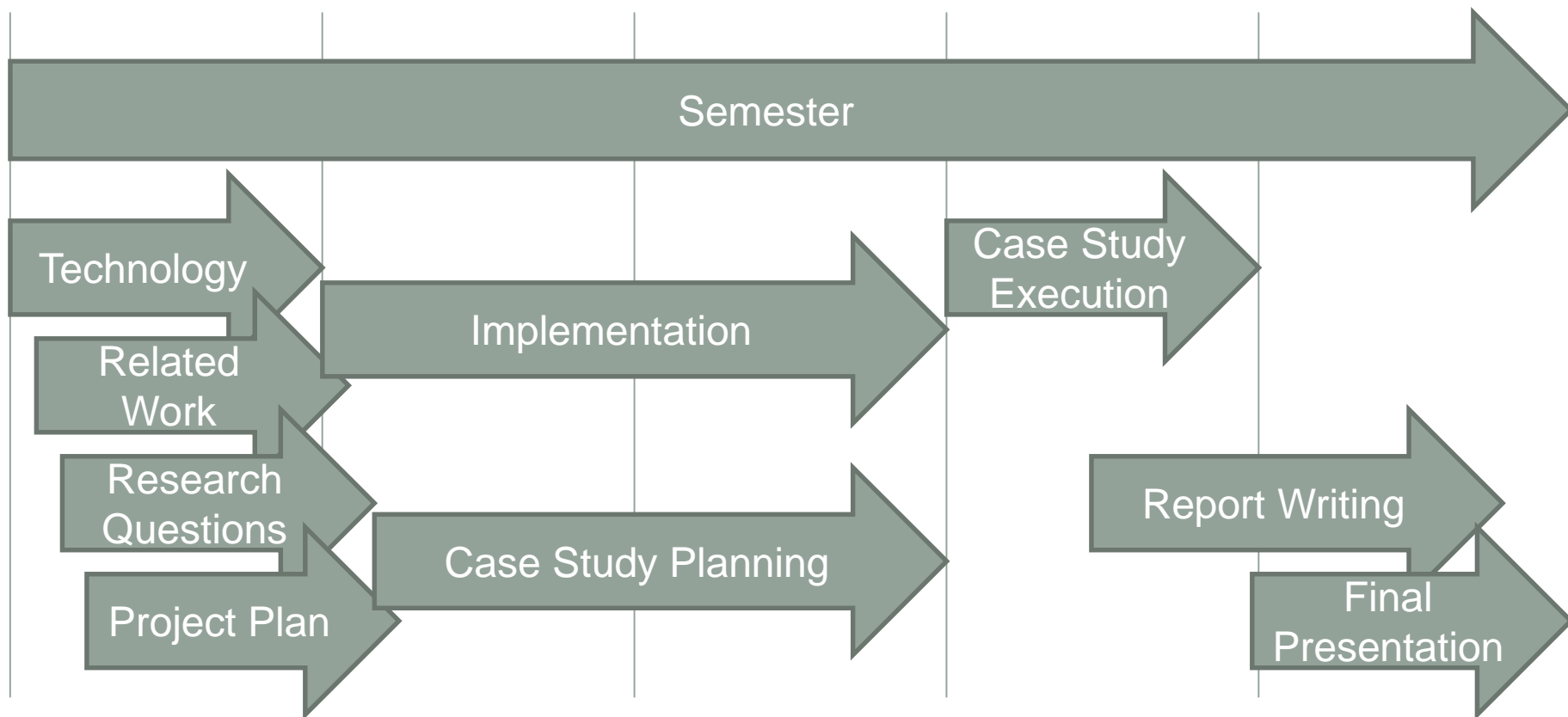
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Basic Course Structure



Testing/Debugging mobile AR

- Try out as much as possible without phone
 - Use Vivian mouse interaction
- Press play in Unity with smartphone attached
 - Requires ARCore Instant Preview
 - Logs visible in Unity
 - Connection via USB or Wi-Fi (requires configuration via adb)
- Use adb
 - `adb.exe logcat | grep Unity`

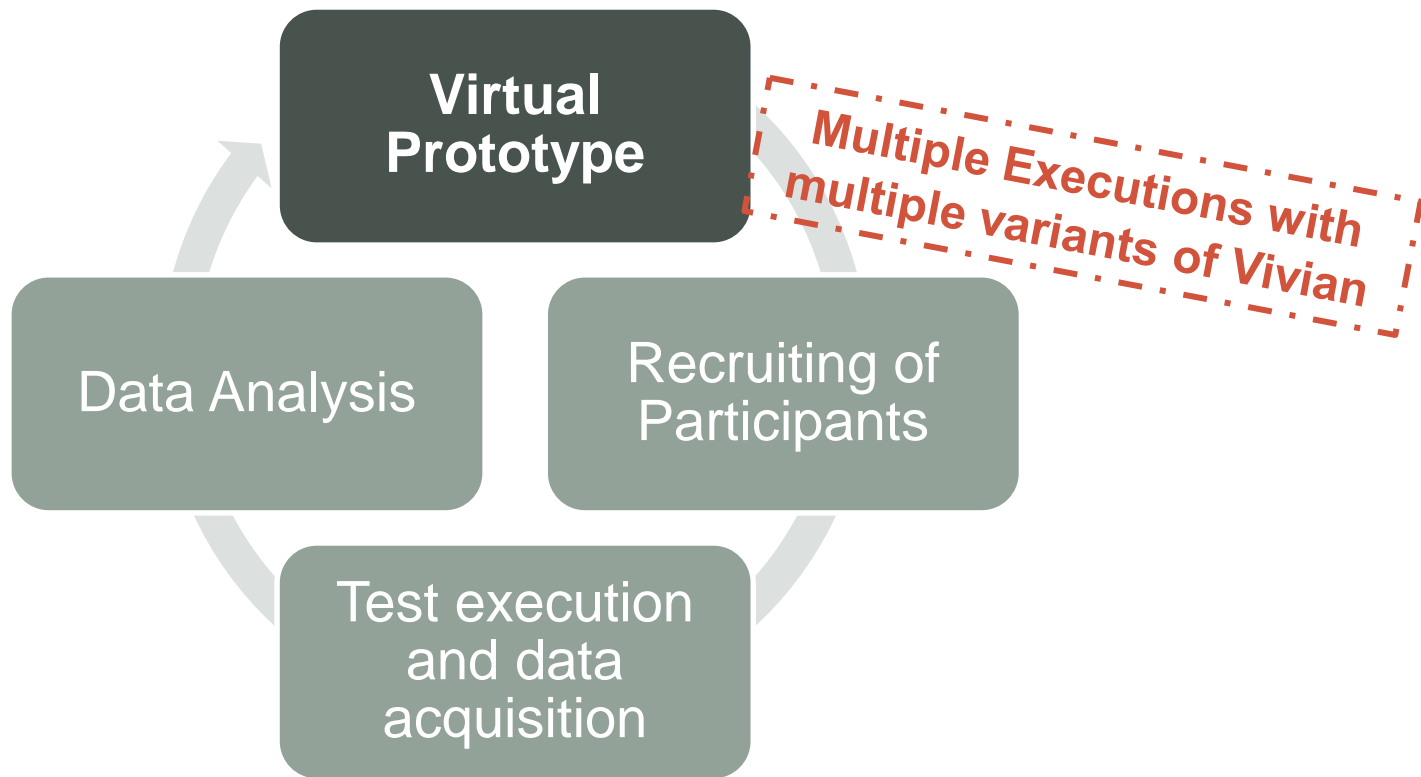
Vivian Framework – Goal

- Evaluate usability of virtual prototypes
- Evaluate in 2D using any computer
- Evaluate in AR
 - Present: mobile AR
 - Future: AR with stereoscopic glasses
- Evaluate in VR
 - Present: virtual laser pointer, hand tracking/virtual hands
 - Future: Gaze pointer, gloves, other VR headsets, ...

Research Areas

- AR: Evaluate how to best introduce users to mobile AR
- AR: Evaluate how to react on wrong usage
- AR/VR: Moving and rotating objects
- AR/VR: Visualizing feedback out of sight
- VR: Gaze pointer interaction for the Vivian Framework
- VR: Optimal prototype positioning in the Vivian Framework

Case Study



Tasks for upcoming week

- Decide for research area/question
- Provide idea of how to address it
 - Decide which of your prototypes to use
- Create a first project plan

Presentations next week

- First group presentation
- Decisions made
 - Research area
 - Prototype(s)
- Project Plan

Questions???

