Orbital 2018 Briefing

14 Mar 2018
Seminar Room 1
16:00-17:00

NUS
National University
of Singapore

Agenda

- General Information
- Projects and Level of Achievement
- Timeline
- Peer Evaluation Process
- Mentorship
- Registration
- To-dos
- NOC Information Session

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General Information

- Summer independent project course

- Any topic, anywhere, any difficulty level

- 4 MCs (under CP2106), S/U grading

- No risk, no cost

- Workload: ~11 hours per week

General Information

- Teams of 2 students

- 1 advisor for each team

- (optional) mentorship for advanced teams

- Workshops

- Self learning + peer learning

Projects

- "Solve your own problem"
  (NUS / SoC centric - e.g., module bidding / selection / IVLE)

- "I had always wanted to try...."
  (Personal Interest - e.g., mobile app and game development)

- "Gonna win it this time"
  (submission to a SW competition, e.g., Kaggle, Apps4SG)

- "Getting my hands dirty"
  (HW+SW, Lego Mindstorms, Arduino)

- "It's so me..."
  (Quirky, describes the team - e.g., clothes matcher)

Levels of Achievement

National University of Singapore

Восто́к (Vostok) (Easy/Beginner) – Attend at least 12 hours of work-shops, complete a basic web application (following the Google App Engine/Python/Django framework as outlined by our programme). Complete the weekly check-ins and monthly peer-grading exercises. Participate in the end of summer showcase. Must score a minimum of 2 stars on feedback given to other teams and on own peer-graded project. Must show evidence of development progress in all three months of the programme.

(Восто́к was name of the series of spaceflight program started by the Soviet Union which was the first to successfully launch a human, Yuri Gagarin, into space, and return him safely to Earth).

Project Gemini (Intermediate) – Completes the milestones for Vostok, and extends it further, completing at least 4 additional extension mile-stones. Possible extensions to be detailed later, but currently (as of 15 Feb 2013) may include: social integration, mobile client, iterative usability testing, application-specific feature extensions, multiple / administrative frontends, downloading of user data. Must be active on either the askbot forum or the weekly mission control sessions. Must score a minimum of 2 stars on feedback given to other teams Must score a minimum of 3 stars on own peer-graded project.

(Gemini was the second manned spacecraft programme by the USA. It launched ten missions between 1965-1966. Neil Armstrong cut his chops in Project Gemini before returning in the USA's Project Apollo series of missions.)

Apollo 11 (Difficult/Advanced) – Custom project defined by either the student team or the mentoring staff. Must fulfill requirements of Project Gemini while extending further. Strong evidence of project management and source code control. Must render assistance to other teams, by par-ticipating on the askbot forum and in the weekly mission control ses-sions. Must score a minimum of 3 stars on feedback given to other teams. Must score a

Change any time you like.

But we need to have an idea of which you're aiming for.

What you do by Splashdown is what you get.

(We shamelessly hope more of you will be sucked into the higher levels of achievement.)

Eligible for mentorship

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The Basic Project:
A Web Application

The Combo: Javascript + MeteorJS

Javascript - Easy language. One of the core technologies of web development. Used in many Web frameworks.

MeteorJS - Easy Web framework to start learning. Allow for rapid prototyping.

(Project Gemini and Apollo 11 teams may want something else)

Mandatory Events

14-15 May - Liftoff Workshop

(Crash course on basic tech, idea formulation)

4 Jun - Evaluation Milestone 1 - Ideation

2 Jul - Evaluation Milestone 2 - Prototyping

30 Jul - Evaluation Milestone 3 - Extension

5 Sep - Splashdown - Refinement

(Poster session and award ceremony)

Optional Events

19/26 May, 2/9/16 Jun - Mission Control Workshops

(Saturday workshops on specialized / advanced topics + hacking time + team meetings + catered lunch)

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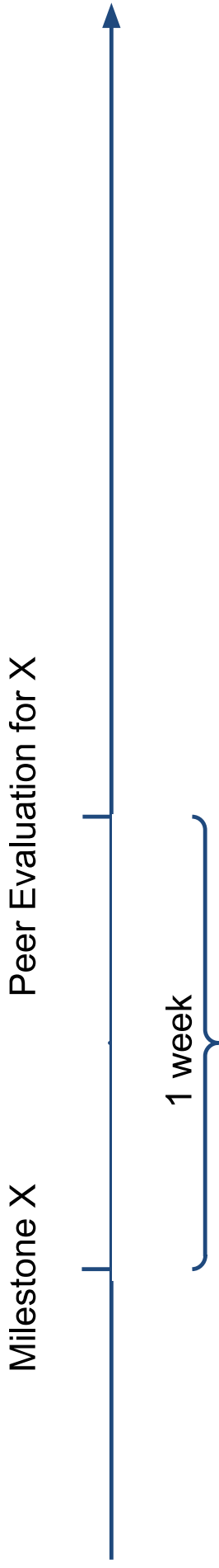of Singapore

How do Milestones work?

Milestone X

- Teams use Skylab to file their Milestone reports.

- Reports consist of:
  - README
  - Project Log
  - Project Video

- Teams should check the Milestone's evaluation criteria while preparing for the report.

Peer/Advisor Evaluation

Milestone X   Peer Evaluation for X

1 week

- Teams also evaluate their peers (3 other teams)
  - ○ Peer Evaluators (inclusive of Advisors) watch / read the materials presented by each team.
  - ○ Use Skylab to fill out the form.
  - ○ Helpful and critical constructive comments required for higher levels of achievement.

Negative Feedback

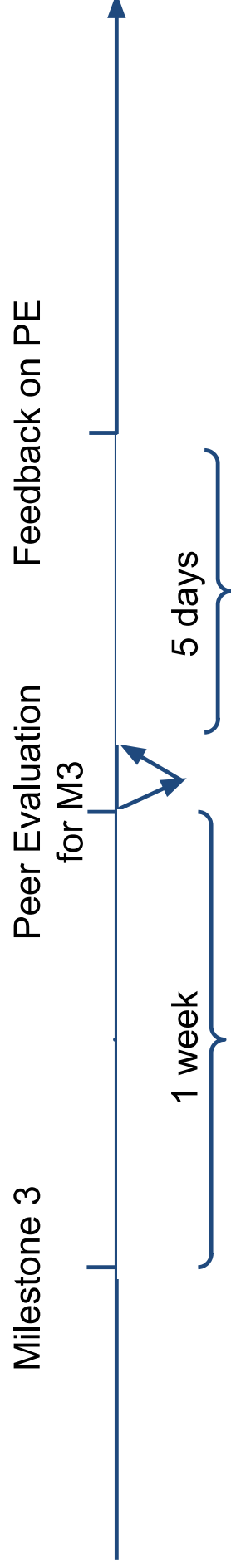Milestone X

Peer Evaluation for X

1 week
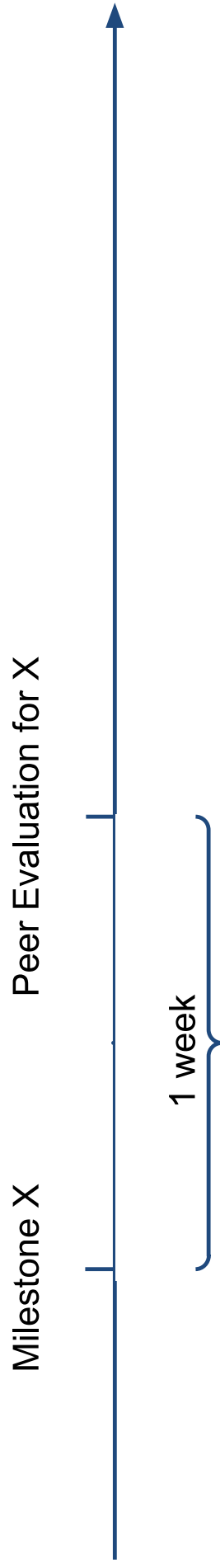
- Constructive (negative) feedback is also part of the form, and is source-anonymized for the receiving team.

N.B. Advisors and other staff can see identity of anonymous contributors.

Peer Feedback

Milestone 3   Peer Evaluation   Feedback on PE
for M3

1 week

5 days

- Final milestone has additional feedback cycle; i.e., evaluate the peer evaluators.

- Obtaining good peer feedback scores is also part of the higher levels of achievement.

- Most teams will evaluate the same peer teams throughout Orbital.

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Mentorship

Mentors are senior students and industry experts who want to pitch in and help guide student teams

They may also propose projects of their own design if teams are keen to work on those topics.

Mentors are only available to advanced level projects, and commit teams to finishing Orbital without withdrawing.

Calvin Cheng

Currently CTO @ Algo Access

@calvinchengx
github.com/calvinchengx

Also, an independent full-stack designer-developer creating my own fun mobile/web projects on weekends

Skills:

Domains of interest:
- Medical tech
- Wireless implementations on hardware devices
- Property (real estate) apps
- Healthcare apps: www.caregiverapp.sg

Meet me via:
- Skype
- In-person (location flexible)

Looking for:
- Teams or individuals who are *always* learning, experimenting & improving & who are intensely curious

"Calvin not only gave great advice for our orbital project, but has also been an excellent mentor in terms of gearing myself to become a better developer. He has given me invaluable advice, and I'm sure you will not regret having him as your mentor"

Nicholas Lui (Apollo 11, Orbital 2015)

Open to:

- Student-initiated project; OR

- co-develop Mentor's apps

Ophto

Mobile app development (iOS),
Ophthalmology app www.ophto.com

Mobile app development (Android),
Caregiver app www.caregiverapp.sg

Registration @ nusskylab-dev

http://nusskylab-dev.comp.nus.edu.sg/

1. Login using NUSNET.

2. Fill in the registration form.

3. Invite a teammate via their registered email address.

4. Accept the invitation in the other teammate's account

5. All done!

To-dos

1. Find a partner
2. Register
3. Decide on a project topic
4. Come up with a draft design
5. Identify and learn about relevant tools
6. Create a schedule for your project