~~The final client demo should represent the entirety of the progress we’ve made on the product.~~

~~In theory there is not that much progress between the CD3 and FCD so I’m not entirely sure what the questions from clients should be about but my guess is that we go into more technical detail and probably reflect on how the project went in general.~~

~~The time we are given is 30min for the presentation plus 40 for Q&A. I think they might time it more strictly now so as to get it done within reasonable time-frame.~~

~~We’ve always busted our 15 mins for the presentation, we might get away with it this time, but I am not entirely sure. We should probably aim for a 15-20 min presentation, 10min demo and then see how things go.~~

~~It should be a comprehensive summary of what we did over the past 11 weeks and a nice wrap-up (we’ve been working with a client so it is definitely more of a summary than the Investors Demo will be - which will be more of a condensed pitch and results presentation).~~

1. ~~Introduction~~
   1. ~~Problem - solution: introduction of the product~~
   2. ~~Plan (show gantt chart?)~~
   3. ~~Team - introduce every member and what they were responsible for - could fuse it with the presentation outline~~
2. ~~Identification of the main challenges / tasks~~
   1. ~~Navigating robot~~
   2. ~~User interface~~
3. ~~Robot~~
   1. ~~Mechanical setup, features~~
   2. ~~Sensors~~
   3. ~~Custom sensor~~
4. ~~Robot software~~
   1. ~~Navigation systems~~
   2. ~~Line following~~

We want to present the entirety of the product and justify the design choices that we made along the way.

1. Introduction - Finn
   1. Introduce the problem
   2. Present a high level solution (a system using an app and a robotic tour guide)
2. App - David
   1. UI & Improvements & Buttons (Since the start the goal has been… We’ve taken feedback from groups and clients to bring you the final version - carousel, eta, canceling paintings)
   2. Text-to-speech, Speech-to-text, and Descriptions
   3. UI testing (Had people test and challenged them to break the app. Sometime other languages don’t work, usually when I’m mumbling / not enunciating) - Mahbub
      1. (graph)
   4. Communication (Communicates with the robot via a server, more on that later)
   5. Multi-phone support (Use case, how it works (multiple families / granny)) (Controllers & Followers)
3. Robot
   1. Mechanical setup - Deividas
      1. Feature: pointer
   2. Sensors setup - Michal
      1. Lego sensors
      2. Expansion via sensor hub
   3. Custom sensor - Michal
      1. Calibration
      2. Polling rate graphs
      3. Response graphs (comparison to lego)
   4. Line following - Michal
      1. Following principle
      2. Branch detection
   5. Navigation - Alice
      1. Map? - talk about the setup? Tape? Green tape for losers (Require less tape but much better) (Don’t wanna miss branch when obstacle avoidance)
      2. (Dijkstra? Yes) - Shortest path planning (when it occurs?? At the beginning and at each painting (at the start and whenever the user changes paintings selection or decides to go to exit/toilet))
   6. Obstacle avoidance - mention why (Why??????? (W H Y??????????(Only have one path and it there is enough place it should go around instead of stpid waiting))) - Alice
      1. Algorithm (Inside - stop, outside - go around(find black - count or turn and follow black)) - if too closed then stop
      2. Limitations
         1. When it think it has not enough place to go through, it will stop and wait, it needs user to remove the obstacle
         2. Hit black line turn but cannot pass because the sensor cannot see
         3. Cannot go backward because people following
         4. Limitations of tape colour - if it hits the outer black line it will get lost
         5. (If not cover the greens) Limitations of other group - green is sometimes detected as black
   7. Some testing
4. Server - Mahbub
   1. Maybe high level description of how it works.
   2. Include failure ratio (error pages vs total visits)
5. Resources - Mahbub
   1. Time budget
   2. Money budget
6. Reflections (keep it short but very concrete)
   1. Deviations from the original plan
   2. Possible improvements
      1. Obstacle avoidance - use odometry, improve sensing
7. Demo - do we want to test the camera setup as Emilia suggested? We might get some feedback for the more valuable investors’ pitch - **NO**

Introduction sample:

Welcome to the final demo of the RoboTour system. Eleven weeks ago we set out with a plan to improve the experience of people in museums. We thought that the language barriers and vastness of the venue prevented people from enjoying it fully.

We imagined that an intuitive smartphone application featuring speech interaction in multiple languages paired with a robotic tour guide would solve this problem.

Today we want to summarise our efforts.

David and Mahbub will take us through the design of the user-facing application, Deividas, Alice, Finn and Michal will speak about the robot, then Finn will go over the used resources and plan execution followed by reflections on the project and we will wrap it up with a live demonstration of the robot.