İSTANBUL TECHNICAL UNIVERSITY



Department of Computer Engineering

BLG456E – Robotics – Fall 2015 Project Proposal Instructions

PROJECT PROPOSAL

The project

The term project well be completed in a group of 2-3 students. The project is to define an interesting robotics problem and develop a solution for it, as well as the associated documentation, verbal defence, and teamwork.

The term project as a whole consists of the following components:

- Proposal document & project plan.
 - Set out the problem that you will solve, your approach, plan, and division of labour.
- Post-proposal face-to-face defence.
 - Discuss your project with the lecturer, determine the criteria on which you will be graded, and defend your proposal.
- Work package 1 (WP1) face-to-face demo & defence.
 - Present a one-page document specifying progress so-far and show what you have done so far to the lecturer. It will be graded according to decisions made at the proposal defence.
- Final demo.
 - Present the final state of the project artefact. No slides, just demo.
- Final report & video.
 - Formally present the results of your project and make a short video about your project for prospective ITU and BL456E students.

The proposal

This is a group assignment. This assignment is to submit the proposal for your term project as well as a plan for completion. Your proposal should be submitted in PDF format and contain:

- Title page:
 - Team name (required).
 - The title of the project.
 - Subtitle: BLG456E Project Proposal
 - All authors and group members + student IDs.
 - Date.
 - Table of contents.
- · "Informative" abstract stating, briefly:
 - What will be attempted.
 - On what platform.
 - A summary of how it will be done.
- An introduction stating:
 - The problem to be tackled and the platform (problem statement).

- Why the problem is important or interesting.
- A 1-2 sentence summary of approach to be taken.
- An outline of the contents of the rest of the report.

· Background.

- Details about problem.
- Details about the robot platform.
- Any information necessary to understand the solution.

Methods

- Suggestions about how you propose to solve the problem.
- Any alternate approaches to the problem you might try.
- Project evaluation, stating how the project's degree of success will be measured.

(that is, how will you know how close you are to achieving what you want to achieve).

- Schedule & outcomes, containing:
 - What will be produced by work package 1.
 - What will be produced by the final demo.
 - What each team member plans to work on. Include items like:
 - Convene (setting up meetings, chase up deadlines, etc.) for WP1.
 - Set up robot platform / simulation environment.
 - · Initial solution.
 - Write first draft of WP1 report.
 - Finalise WP1 solution.
 - Proofread and complete WP1 report.
 - Plan WP1 demo.
 - Convene for final part.
 - Code for solution 2.
 - Code for solution 3.
 - Evaluate and compare solutions.
 - Write first draft of final report.
 - Proofread and complete final report.
 - Plan final demo.
 - Present demo.
 - Design, shoot and edit video.
 - Assign one team member to be <u>responsible</u> for each item, even if all of you will be doing it. There
 should be a balance in terms of responsibilities. Everyone will need to be involved in the demo and
 able to answer questions.
 - Estimate the amount of time needed for each item. In your final report you will evaluate how close you were to this estimate.

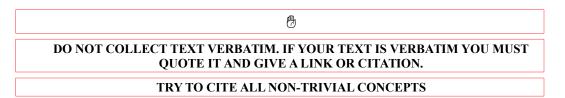
Conclusion:

Repeating main points of the above.

* Variations on the default document structure are, of course, permitted if justified. *

As far as format is concerned, the following are requested:

- Informative section headers.
- Page numbers.
- All figures numbered with captions.
- Full reference list.



The proposal defence

When you submit your proposal, also sign up *as a team* for your 15 minute proposal defence at http://doodle.com/poll/vi8bev4qhwytxyey. Give the team name there. If you need to edit the entry, email your lecturer (otherwise the first entry that you make will be counted).

In order to receive any marks for your proposal, you need to defend it in person.

In the defence you will defend your proposal, discuss it with the lecturer, and together with your lecturer, determine the goals and evaluation criteria for the components of your project (that is criteria on which your project components will be graded, which depend on the goals of your project).

Submission policy

- Each team:
 - Sign up for your proposal defence. Each team should sign up for the face-to-face defence using the doodle poll at http://doodle.com/poll/vi8bev4qhwytxyey. Provide your team name. Each team has a 15 minute slot. If you want to edit your entry you will need to email your lecturer (otherwise, your .firsst entry will be counted).
 - Do this by the submission date of the proposal. In order to receive any marks for your proposal you must defend it in person.
 - Submit (only electronic submissions through Ninova will be accepted):
 - As a **PDF** file:
 - The project proposal in English.
 - Multiple submissions of the proposal are permitted but only one submission will be examined.
- Each team-member:
 - Submit (only electronic submissions through Ninova will be accepted):

- As an **ODS** file:
 - Separate for each team-member: an evaluation of the process of team performance in the writing of the proposal.
- Late submissions or those submitted otherwise than according to instructions will not be accepted.
- Academic dishonesty, including cheating, plagiarism, and direct copying, is unacceptable.
 - * Remember to always quote borrowed text and cite borrowed text and ideas. *

Grading policy

Components:

- Project quality (from report & defence) (50%):
 - Accurate assessment of work involved.
 - 3: Both substantial and achievable as-is in time available.
 - 2: Either stretching to make into a substantial project or to complete in time available.
 - 1: Either highly unlikely to make into a substantial project or to complete in time available.
 - 0: Either highly trivial or won't be finished.
 - Well defined approach:
 - 3: Problem, platform, and solution all specified and correctly detailed.
 - 2: Generally specified, but one of these components poorly specified, or the occasional gap.
 - 1: Some attempt at specifying all parts of the project, or some parts well specified.
 - 0: Scope of problem unknown or platform unspecified.
 - Relevance/imagination.
 - 3: Project is highly relevant or interesting with respect to robotics and its common, open or important problems.
 - 2: Project inspires some curiosity or makes inroads into dealing with relevant robot problems.
 - 1: Project does not entirely miss the point or has some relevance to relevant robotics problems.
 - 0: Project is trivial or has nothing to do with common, open or important robot problems.
 - Research done..
 - 3: Platform, problem and a potential solution well-understood & described.
 - 2: Some of these components well described, or all described to some degree.
 - 1: Some substantial research done has been done somewhere.
 - 0: Nothing new has been studied.
 - Planning:
 - 3: Tasks are balanced and realistically divided. Way-points are logical.
 - 2: The occasional inconsistency in order, or imbalance in division of labour.
 - 1: Some thought has gone into division of labour and time.
 - 0: No plan, unchanged boilerplate, or nonsense.
- Report (see content breakdown above) (50%).

- Completeness:
 - Title, abstract, intro, conclusion.
 - Background & methods.
 - Plan.
- Polish.

Bonus marks:

- Novel approaches.
- Clarity of presentation, use of graphics.
- Depth of understanding.
- Extended design or analysis.

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Deductions:

- Spelling errors.
- Messiness / lack of proofreading.
- Lack of content.
- Irrelevant / mistaken content.