

Foundation Course Hackathon 2014

Sept. 22, 2014

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Theme of the Hackathon

- Problem formulation.
- Realization of concepts:
 - Software Component Re-usability
and
 - System integration

Problem formulation

- Given a problem.
- Think and make decisions how to do it.
depending upon the tools you have learnt.

Software Component Re-usability

- Reusability is the likelihood that a segment of source code can be used again to add new functionalities with slight or no modification[1].
- Advantages:
 - Reduce implementation time.
 - Decrease the likelihood of bugs.
 - Easiness in code modification.

System integration

- Systems integration is the process of linking together different computing systems and software applications physically or functionally, to act as a coordinated whole[2].

Realization of concepts

- Given topics will be considered as use cases.
- Uses cases are a way of realizing and demonstrate the concepts.
- Use cases should be developed keeping in mind the theme of the hackathon.

Topics

- Implementing the Subsumption robot control architecture.
- Implementing the RRT motion planner for robot manipulator
- Controlled Motion of the Arm.
- Controlled Motion of the Base.
- Vision based Grasp Verification for Robocup @work scenarios

References

- <http://en.wikipedia.org/wiki/Reusability>
- http://en.wikipedia.org/wiki/System_integration