

# System Design Project 2012

## Course Guide

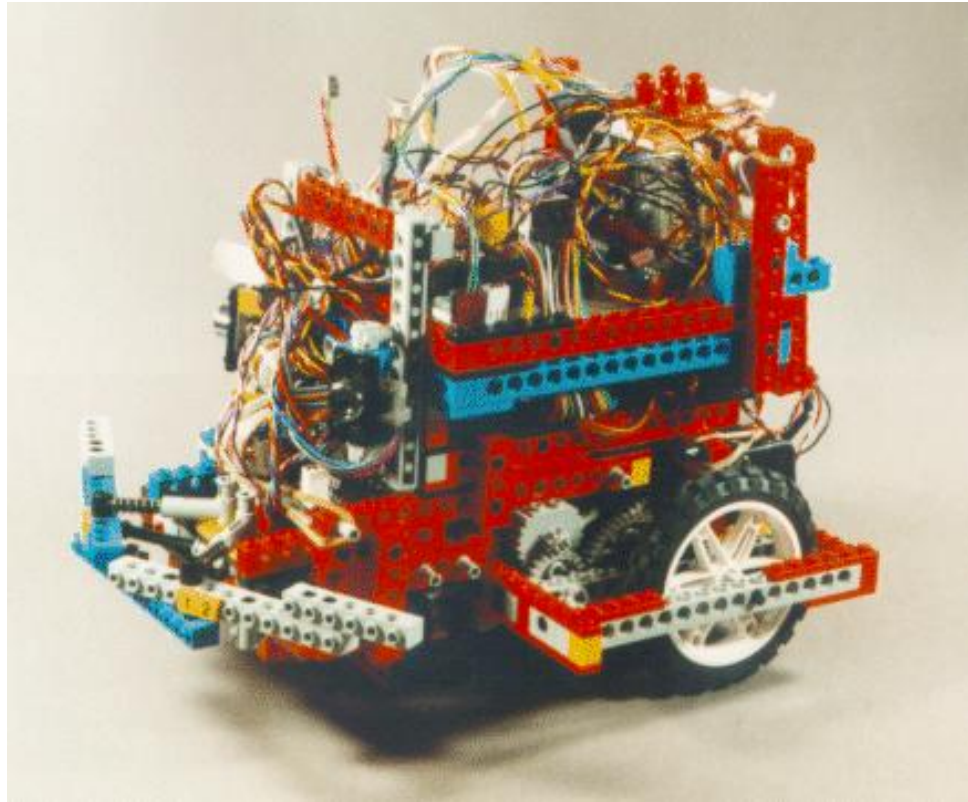
Philip Wadler, Course Organiser

Michal Dziemianko, Teaching Assistant

Garry Ellard, Course Technician

<http://www.informatics.ed.ac.uk/teaching/courses/sdp/index.html>

# Lego football robot



Note the wheel—don't reinvent it!

- Reuse previous group's work as appropriate. (It's not cheating!)
- Justify if you build from scratch rather than reuse.

# Schedule

Week	Date			Item
1	9am	Wed	18 Jan	Lecture: Introductory briefing
3	2pm	Wed	1 Feb	Milestone 1: Penalty Kick
5	2pm	Wed	15 Feb	Milestone 2: Navigate to Ball
6	2pm	Wed	29 Feb	First Friendly
7	2pm	Wed	7 Mar	Milestone 3: Score a Goal
8	2pm	Wed	14 Mar	Second Friendly
9	2pm	Wed	21 Mar	Milestone 4: Intercepts
10	2pm	Wed	28 Mar	Third Friendly
11	9am	Wed	4 Apr	Final Day
–	4pm	Thu	26 Apr	Final reports

# Milestones

Week	Date			Item
3	2pm	Wed	1 Feb	Milestone 1: Penalty Kick
5	2pm	Wed	15 Feb	Milestone 2: Navigate to Ball
7	2pm	Wed	7 Mar	Milestone 3: Score a Goal
9	2pm	Wed	21 Mar	Milestone 4: Intercepts

Each milestone consists of three tasks, each task attempted three times.

- 2 points: Perform the task reliably (all three trials).
- 1 point: Perform the task unreliably (on some trials).
- 0 points: Fail to perform the task.

Typical team will earn 4 points out of 6 for each milestone.

## Performance reviews

Week	Date			Item
3	4pm	Thu	2 Feb	Performance Review 1
5	4pm	Thu	16 Feb	Performance Review 2
7	4pm	Thu	8 Mar	Performance Review 3
9	4pm	Thu	22 Mar	Performance Review 4

Performance review conducted by group members, mentor, and mentor from another group. Come to a consensus view of each member's contribution.

- 9 points: Exceptional effort (strong contribution to two or more aspects).
- 6 points: Good effort (one solid contribution or two fair contributions).
- 3 points: Poor effort (some contribution).
- 0 points: No effort.

Typical student to earn 6 points out of a possible 9.

Unusual for more than three in a group to be awarded for exceptional effort.

## Performance reports and final reports

Week	Date			Item
3	4pm	Thu	2 Feb	Performance Review 1
5	4pm	Thu	16 Feb	Performance Review 2
7	4pm	Thu	8 Mar	Performance Review 3
9	4pm	Thu	22 Mar	Performance Review 4
–	4pm	Thu	26 Apr	Final reports

- Individual performance reports, one page.  
Due 4pm Thursday following each milestone.  
Submit to ITO. Mandatory, but not marked.
- Final reports.  
Individual: two pages. Group: five pages.  
Due 4pm Thursday the first week after spring break.  
Submit *two* copies to ITO. Worth 10 points.

Page limits are *strict*. Use 12pt font.

# Friendlies and Final Day

Week	Date			Item
6	2pm	Wed	29 Feb	First Friendly
8	2pm	Wed	14 Mar	Second Friendly
10	2pm	Wed	28 Mar	Third Friendly
11	9am	Wed	4 Apr	Final Day

Panel for Final Day includes industry representatives:

Accenture, Amazon, Cisco, Citi, Freescale, Google, IBM, and Kal.

Final day has three parts.

- **Presentations.** Strict fifteen minute time limit.
- **Tournament.** Similar format to friendly.
- **Prizegiving.** Cash awards donated by industry.

# Assessment

## **Individual: 46%**

four performance reviews at 9% each: 36%

final individual report: 10%

## **Group: 54%**

four milestones at 6% each: 24%

Final Day presentation: 10%

Final Day robot performance: 10%

final group report: 10%

# Communication Skills

Week	Date			Item
3	3pm	Fri	3 Feb	Lecture: Communication Skills 1
4	3pm	Fri	10 Feb	Lecture: Communication Skills 2
5	3pm	Fri	17 Feb	Lecture: Communication Skills 3
6	3pm	Fri	2 Mar	Lecture: Communication Skills 4

- William Strunk, Jr., and E. B. White, *The Elements of Style*, Longman, 1999 (Fourth edition). (First edition 1959.)
- Sir Ernest Gowers, *The Complete Plain Words*, Penguin, 2004 (Third revised edition).
- Edward Tufte, *The Visual Display of Information*, Graphics Press, 2001 (Second edition).
- Max Atkinson, *Lend Me Your Ears: All you need to know about making speeches and presentations*, Vermilion, 2004.

## Lab schedule

Lab space is allocated for 9am–1pm on Wednesdays mornings.

Lab reserved exclusively for SDP in last two weeks of term.

Garry Ellard, the course technician, is available as follows:

11.30am–1pm, 2–3.30pm                      Mon Tue Thu Fri.

9–11am, 11.30am–1pm, 2–3.30pm      Wed.

# Problems

- Raise problems with mentor or course organizer. Earlier is better!
- In rare cases an individual may not contribute to group.  
Please be sensitive! There may be factors that are not obvious.  
In extreme cases group contribution to mark may be reduced, down to 0%.
- Discuss any problems with individuals or group dynamics with your mentor.
- If you have an issue with your mentor, see me.
- I'm happy to speak with anyone, anytime.