

G52GRP 2012–2013: Lecture 2

Work Organisation and Assessment

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Groups

- You have now been divided into groups of 5 to 6 students and assigned a supervisor and a project.
- Check <http://www.cs.nott.ac.uk/~nhn/G52GRP>.
- If you are **not** in a group, but think you should be, let me know **urgently**.
- If you have tried but failed to get in touch with some member(s) of your group, let me know **urgently**.

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This Lecture

- Some notes on team working (Partly based on slides by Prof. Dave Elliman)
- Group meetings
- Software Development Methodology
- Assessment

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Team Working (1)

Teams can be fun!



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Team Working (2)

But sometimes they don't work well . . .

- Inadequate organisation
- Low commitment
- Apathy
- Conflicts



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Characteristics of teams that work

- Balance of member skills — and making good use of those skills
- Clear goals
- Clear responsibilities
- Good organisation
- Good communication, including *listening*
- Commitment to goals: willingness to put group goals before ego and/or comfort
- Mutual respect and valuing

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Necessary Roles

- Motivator (initiator)
- Idea generator
- Team worker (“getting the job done”)
- Specialist (technical, writing, . . .)
- Coordinator (administrator)
- Censor (devil’s advocate)
- Mediator (supporter, mentor)
- Monitor (tester)
- Completer-finisher

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Formal Roles (1)

Every group should elect a *Group Leader*:

- Overall planning and coordination.
- Motivator
- Arbiter
- Main point of contact

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Formal Roles (2)

Additionally, the following are highly recommended:

- Editor
- Technical Lead
- Quality Assurance Lead
- Repository Master

Other useful roles:

- UI Designer
- Open Day Producer
- ...

Formal Roles (3)

Editor responsibilities:

- Document structure
- Layout (creates templates)
- Structure of writing process (e.g. draft deadlines, organisation of proof reading)
- Integration of contributions

Formal Roles (4)

Technical Lead responsibilities:

- System architect
- Identify key technical choices, pros and cons
- Lead programmer (as projects not too large)

Formal Roles (5)

Quality Assurance Lead responsibilities:

- Making sure requirements are testable.
- Planning for quality assurance, in particular testing.
- Writing test cases.
- Automation of testing, in particular regression testing

Formal Roles (6)

Repository master responsibilities:

- Overall responsibility for managing project site and repository
- Training everyone in how to use the site and associated tools
- Project website deadline. 2 Nov.

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Some tips

- Be positive: see challenges, not problems
- Work on the assumption that every team member really wants to do his or her best.
- If someone does not contribute effectively, try to find out why, and what can be changed to help.
- Attempt to handle conflicts within group, but ultimately, don't be afraid to ask supervisor or module convener for help.

- A student's perspective here:

<http://www.webcitation.org/66Tn1A07Q>

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Formal Roles (7)

Note:

- Not all roles relevant all the time.
- Roles can be shared/further subdivided.
- One person can have more than one role.
- Role owners should not be expected to do all work associated with role. Rather, think “organiser”.
- Role owners not exempt from helping out with other aspects!

Everyone should pull their weight all the time!

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Group Meetings

Two kinds of meetings:

- Informal meetings
 - Only the group members.
 - Usually one per week, more if necessary.
- Formal meetings
 - All group members plus the supervisor.
 - One meeting per week, about 30 min.
 - Compulsory!

If you cannot make it, apologies to the meeting chair well in advance.

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Informal Group Meetings (1)

Purpose: coordination and getting some real work done.

Typical activities:

- Develop a group-wide understanding of what the project is and a consensus about its aims.
- Organisational matters:
 - electing group leader
 - division of work
 - developing time plans
 - developing work procedures

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Informal Group Meetings (2)

- Design discussions.
- Discussions about specific technical problems.
- Reviews and inspections:
 - design documents
 - reports
 - code
- **Prepare for the formal meetings.**

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Informal Group Meetings (3)

Of course, a lot of work needs to be done outside meetings, individually or in small subgroups; e.g.:

- Background research
- Detailed design
- Writing design documents and reports
- Coding
- Testing & Debugging

Remember: If you don't put in on average 9 h/week, you are not working hard enough! (Coffee-breaks not included. :-)

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Formal Group Meetings

Purposes:

- Formally monitor progress by reviewing minutes from preceding formal meeting.
- Formally take major design decisions.
- Formally decide on what should be done over the next week, and who is responsible.
- Keep supervisor informed about where the project is going.
- Seek input from supervisor.
- Discuss problems.

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Chairperson and Secretary

- There should be a **Chairperson** (or **Chair**) and a **Secretary** for each meeting.
- These roles should **rotate** within the group.
- The Chair **organises** and **leads** the meeting.
- The Secretary **records** what happened and what was decided during the meeting in the **minutes**.

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The Chairperson

The Chair runs the formal meeting:

- Prepares a written agenda **prior** to the meeting, makes it available to the group and supervisor (via project site and/or e-mail), and brings printed copies to the meeting.
- Leads the meeting by following the agenda.
- Ensures that the meeting remains focused.

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The Secretary

The secretary records the meeting:

- Takes notes during the meeting:
 - Who are present & apologies
 - Summary of major points
 - All decisions
- Compiles these notes into minutes **immediately after** the meeting.
- Makes the minutes available to all group members and the supervisor. They then check that the minutes correctly reflects the meeting.

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Minutes (1)

- A written summary of a meeting is called the **minutes** of the meeting.
- The minutes help keeping the work organised and focused.
- The minutes should be **archived**: using the facilities for sharing documentation through the project site is a good idea.

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Minutes (2)

The minutes should record:

- Date, time, and place of the meeting.
- Chair, Secretary, who is present.
- Apologies from those who are absent.
- The main points discussed during the meeting
- All decisions.
- All action points.
- Date, time, place, Chair, and Secretary of the next meeting.

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Action Points

- Each meeting generates a list of action points. Three parts:
 - **What** the task is.
 - **Who** is assigned to the task.
 - **When** the task should be finished.
- The purpose of the action point list is to:
 - provide a clear and concise record of the work that needs to be done
 - ensure that tasks are not forgotten
 - make it easy to ensure an evenly distributed workload.

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Example of Action Points

- **John:** Find a good Visual Basic Book
Done by: 11 Nov (next group meeting)
- **Mark and Sarah:** Fix the “sorting bug”
Done by: 8 Nov (urgent)
- **All:** Finish interim report chapter drafts
Done by: 18 Nov

It can be helpful to clearly identify particularly urgent action points to help ensure they get priority.

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Structure of the Formal Meetings (1)

Typical agenda:

1. Opening of the meeting
2. Apologies
3. Review of progress since last meeting.
4. ...

... ..

$n - 2$. Any other matters

$n - 1$. Next meeting: Date, Chair, and Secretary

n . Closing of the meeting

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Structure of the Formal Meetings (2)

- Progress review: be sure to follow up on all outstanding action points.
- Review of old action points and other discussion will generate further action points. Record them (e.g. on white board).
- Be sure to review all new action points towards the end of meeting to ensure everyone knows and understands what their tasks are.

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Software Development Methodology

- You can use any appropriate methodology.
- Agile methods have been found to work well in the context of the group projects.
- Be sure to use **prototyping!**

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Personal Logs

- In addition to the formal meeting minutes, it is useful to keep your own personal log.
- The log can be used to:
 - keep track of your tasks
 - record how your time is spent
 - note down any ideas you have
- The log is very useful
 - to organise your own work
 - in group meetings
 - when writing the individual reports

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Why prototype?

G52GRP is a difficult module for many reasons:

- Large, unstructured task.
- New application domain.
- Medium- to large-scale software development will be a new experience to many of you.
- New people.

Prototyping can help with these!

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How can prototyping help?

- Prototyping helps in understanding the problem domain and the key difficulties:
extremely valuable design input!
- Prototyping gives insights regarding how to best structure the implementation:
helps large-scale software development.
- A prototype is something concrete that everyone can try out and have opinions on:
ensures everyone is on the same page and pulls in the same direction.

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Assessment (2)

Peer assessment used to distribute the Collective Group Mark amongst the members, yielding **Individual Mark for Group Work**.

Overall Individual Mark:

Task	Marks [%]
Individual Mark for Group Work	80
Individual Report	20

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Assessment (1)

Collective Group Mark:

Task	Marks [%]
Group Project Site	5
Interim Group Report	15
Final Group Report	30
Software	20
Open Day	15
Presentation Day	15

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Peer Assessment

Each group member evaluates all other group members along a number of dimensions:

- Research and Information gathering
- Creative input
- Co-operation within group
- Communication within group
- Concrete contribution
- Attendance at meetings

Completely confidential and vetted by supervisor!

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Peer Assessment Form

	None	Lacking	Adequate	Good	Excellent
Research & information gathering					
Creative input					
Co-operation within group					
Communication within group					
Concrete contribution ^a					
Attendance at meetings					

Justification of assigned ratings:

Concrete contribution: Quality and quantity of concrete contribution to *group deliverables*: writing, coding, testing, open day display, preparations for presentations, etc.

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How to Interpret the Form? (2)

- It is not uncommon that a couple of peers excel in one or two respects.
- It would be **unusual** for a peer of yours to be excellent in all respects.
- It would be **very unusual** for all of your peers to be excellent in all respects.

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How to Interpret the Form? (1)

- **Adequate** signifies having performed as well as can be expected. For example, a member who:
 - carried out a fair share of the work
 - were reasonable, approachable, friendly
 - attended most meetings, mostly on-time, absent only with good cause.
- **Good** and **Excellent** signify performance above and much above this level, respectively.
- **Lacking** and **None** signify performance below and much below this level, respectively.

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How to Interpret the Form? (3)

Assesment of a typical group mate:

	None	Lacking	Adequate	Good	Excellent
Research & information gathering			x		
Creative input		x			
Co-operation within group			x		
Communication within group					x
Concrete contribution ^a			x		
Attendance at meetings				x	

Justification of assigned ratings:

John generally pulled his weight throughout the project, delivering his fair share of work to a good standard in a timely way. However, he did take a bit of a backseat in the design discussions. On the other hand, he later greatly facilitated communication within the group. He missed a few meetings, but always with good cause.

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How to Interpret the Form? (4)

- However, what is most important is that the form is used reasonably consistently *within* your group.
- You may thus want to consider *discussing* what the *norms* should be in your group.
- You may even want to firm up (some of) these norms as a written *Group Working Contract* that all team members then signs. E.g. agreeing on attendance expectations should be easy.
- Have these discussions early!

Effect of Peer Assessment: Example

- Group of five: Anna, Emma, Adam, John, Paul.
- Assume Collective Group Mark is **58**, Emma got much better peer assessment than anyone else, Paul much lower, others broadly similar.
- Would yield Individual Marks for GW like:
 - Anna: 60
 - Emma: 71
 - Adam: 61
 - John: 58
 - Paul: 40
- Note: *Average* of individual marks = **58**.