CNSCC210 Group project

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Outline

- Introduction to group project
- Working in group
- Project design report

1. Introduction to group project

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Group task

Computer Game Design using Java JSFML(2D)

Java bindings for Simple and Fast Multimedia Library (SFML)

- not simple game, but High level's computer game
- similar to commercial game

The reason for doing this

- LU topic
- Valued in business, prosperous industry
- Comprehensive training
    - story creation, art,
    - computer graphics, image
    - programming
    - VR, 3D, AI

Objective_1

- Gain experience and understanding of teamwork
  - Project management
    - Allocation of tasks, understanding each individual's strengths
  - Project planning
    - Time management, working to agreed deadlines
  - Managing unexpected problems
  - Group based implementation
    - Working to agreed interfaces and software integration
  - Project delivery
    - Reports and presentations

Objective_2

- Game design technology
  - Game design principle
  - Game designed rule
  - Development technique
  - Test and documentation

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Course arrangement

- Term 1: Plan and design an engaging computer game system
  - *Note: This is the core purpose of this module*
  - *Don't jump ahead and start trying to implement*
- Term 2: Build and demonstrate system

Timetable

- Week 1-8 (SX710)
- Lectures
  - More practical knowledge and advices than traditional lectures
- Lab sessions(Group activity)
  - Group activity in lab slots
  - Staff meet groups once every two weeks

Group activity

- Exchange, discuss the work
- Make decision, such as the theme, concept, implementation
- Programming
- Others…….

Week	Lecturer	Topic
1、1	Jie Liu	Introduction to working in groups
1、2		Group activity
2、1		**Group presentation**
2、2		Holiday
3 、1		Game design principle
3 、2		Group activity
4、1		Game design rule Introduction to implementation
4、2		Group activity

Week	Lecturer	Topic
5、1	Ji dong	Management of project
5、2		Group activity
6、1		Design report writing
6、2		Group activity
7 、1		Design report writing
7 、2		Group activity
8、1		Group presentation
8、2		Group activity

Group

- Group: each group has 5 people
- Group leader, one group has a group leader
- Supervisor, each group need select a supervisor

-Your system must be approved by your ‘supervisor’

- Advise and push your work forward
- Your supervisor is also the customer, give your advices

Assessment

- 100% Coursework

Deliverable	Title	Deadline	Weight %
D1	Design Report	Week 1-10	30
D2	Presentation	Next semester	30
D3	Demonstration	Next semester	30
D4	Self-Reflective Report	Nest semester	10
D5	Contribution part	Next semester	± N(e.g. 5)

Scheme

$$F=D_1*0.3+D_2*0.3+D_3*0.3+0.1*D_4+D_5$$

$$D_5=\frac{S_n-S_g}{S_{max}-S_g}*5$$

$$S_n=(S_p+S_t)/2$$

Plagiarism

- Passing off someone else's work as your own, including:
  - Submitting (e.g.) code that someone else wrote
  - Paying for someone else to do it for you
  - Working on a piece of non-group work together as a group, and submitting it as individual work
  - Sharing of code that you then possibly adapt
- Rules still apply for group work
  - Anything from outside group MUST be acknowledged
  - Group members need to state main contributions in D4

2. Working in group

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- Why a group work
- How to start
- How to proceed
- Group management problem

Why a group project

- Most real projects are too big for one person
- Studies suggest around 1/3 companies see shortage of people with group working skills,2/3 note shortage of related communication skills
- Required for accreditation by professional bodies
- Important transferrable skills
  - Technical people often weak in soft skills
    - Technical writing, reading documentation, communication, collaboration, management, presentations

Why a group project

- Develop understanding of common problems encountered when not fully involved in design and development of all components/ parts of a system

- Valuable set of skills
  - Expected by employers and professional bodies
  - Not generally developed by individual work

Group development

- Forming
  - Orientation: uncertainty, hidden feeling, pretend to get on
- Storming
  - Resistance and conflict, let down the polite barrier, try to get down to issue even the temper flare up
- Norming(规范化)
  - Openness: get to know each other and develop trust and productivity
- Performing
  - Constructive action, working in a group to a common goal on a highly efficient and cooperative basis

Where to start?

Establishing the ground rule

- Best to have agreed norms(规范) for
  - Work
  - Communication
  - Meetings
  - Process

Work norm

- How will work be distributed?
- How will work be reviewed?
- What happens if commitments not met?
- What if people disagree on…?
  - Quality of deliverables
  - Work habits

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Communication norm

- Large projects can involve more communication than coding
- When and how should people communicate?
- Must ensure information properly disseminated
    - People not working with old information/ assumptions
- What level of private communication is OK?
    - Need to ensure people not left out
        - Involved in key decisions

Meeting norm

- What is everyone's schedule?
- How are meetings coordinated?
- When and where will meetings be held?
- What happens if people are late…or miss meetings?

Process norm

- What happens if conflict arises?
- For example, if people…
  - Dominate discussion
  - Are uncomfortable with what's going on

How to proceed

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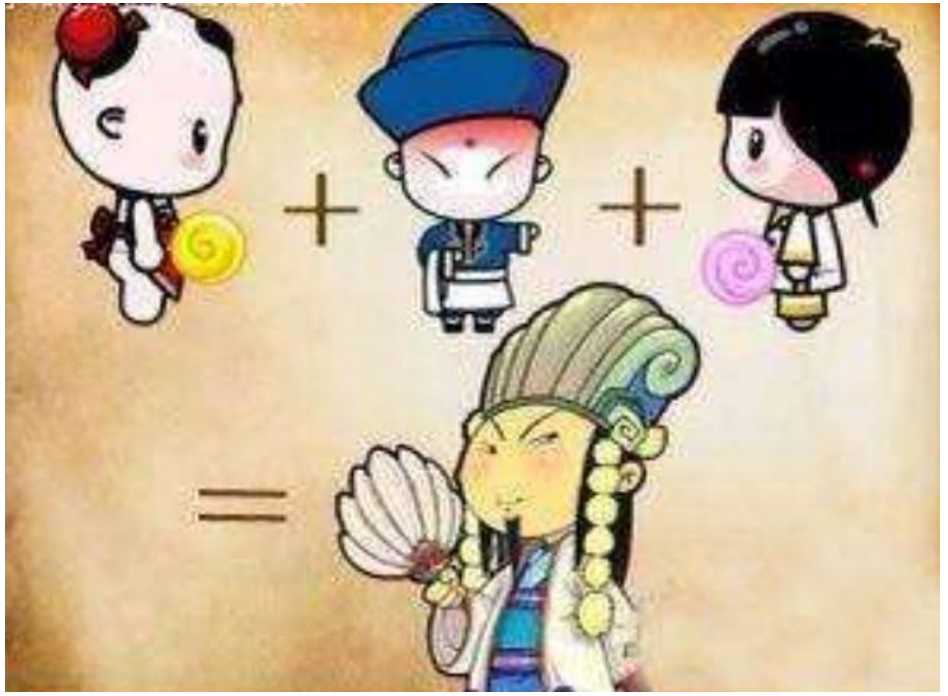
- Be clear on the task
  - Break it down
  - Allocate tasks and actions effectively and fairly
- Create a schedule/ plan
  - Know your time limits
  - Be realistic
- Have regular meetings
  - Keep people informed
- Know when to ask for help
  - Have a back-up plan

Group problem



The wisdom of the masses exceeds that of the wisest individual

To drink water, one should carry it by himself
To drink water, two would carry it together
Unfortunately, there would have no water if there are three people.

Indecision

- List all ideas group has generated, then, either…
  - Multi-voting (for important decisions)
    - Each person votes on their top four choices
    - Take top 3 or 4 then identify
      - Similarities and Differences
      - Positive and negative aspects of each
    - Each person votes again for their top 2 choices
  - ‘Quick and dirty’ (random)
    - Each person given say 100 points to allocate
    - In any way they see fit
  - In both cases option with highest total is taken

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Struggling

- Groups often not as productive as they could be
  - Especially when people
    - Getting to know each other
    - Trying to understand how others work
- Can you agree what you're trying to accomplish?
- What do you need in order to move forward?
    - Draw up a list of tasks
    - Break these down into manageable chunks

Moving Too Quickly

- Sometimes one person impatient
  - Reaches decisions too quickly
  - Keen to move on before wise to do so
- Can they explain the detail?
  - This will often highlight issues
  - It is for them to convince the others
  - Maybe ask…
    - “Are we all ready to make a decision on this?”
    - “What must be done before we can move ahead?”
    - “Let’s check where everyone stands on this.”

Digressions and Tangents

- Easy to get caught up in things not central to task
- A little can be good
  - Helps group gel
  - Can spark ideas
- Can easily dominate meetings and delay progress
- Leader should impose time limit on such talk and call for return to main discussion

Groupthink

- Highly cohesive groups tend to lose critical evaluative capabilities
- Symptoms
  - Illusion of group invulnerability
  - Self-censorship by members and premature consensus
  - Applying pressure to deviant members to conform
  - Protecting team from viewpoints of outsiders
- Possible approaches
  - Encourage sharing of viewpoints
  - Have sub-groups work on same problem, share and discuss
  - Elect a devil's advocate for each meeting
  - Review decisions after consensus reached

Friction or Feuding

- Conflict related to
  - Work or something outside group
  - Parties need to
    - Discuss problem
    - At least achieve a professional working relationship
- Factions
  - Sub-groups or factions forming
    - An in-group excluding one or more members
    - In worst case ignoring or ridiculing others
  - All members need to
    - At least report to, and discuss progress with, all members

Managing Conflict

- Always be respectful
  - Both verbally and in general attitude
  - Remember: online remarks can be easily misinterpreted
- Listen carefully
  - Aim to discover cause of conflict
- Once issue properly understood
  - Demonstrate understanding
  - Then state your views

Passive people

- They avoid conflict and controversy, don’t say where they stand
  - Sometimes willing to share opinions in private
  - May say different things to different people
- Approach
  - Set clear example of expectations
    - Reward everyone that voices opinion, takes initiative, …
    - Passive people will normally respond

Overly quiet people

- Unsure of themselves, uninvolved in group, shy, bored, tired, …
- Approach
  - Make an effort to engage them
    - Maybe they have a concern they feel unable to voice
    - Have they seen a real problem with the agreed direction?
  - Ask opinions or just something about themselves
    - Ideally, phrased to avoid simple yes/ no answer
  - Show appreciation for any contribution

Over talkative people

- ‘Well-informed’ and eager to show it
  - Can be a response to insecurity/ uncertainty
  - Often unable to read others and monitor own behaviour
- Approach
  - In meetings, bring in other people at first opportunity
    - Limit opportunities for them to dominate
    - Humour can sometimes work to discourage behaviour
  - If subtlety doesn’t work
    - Privately explain that while enthusiasm is appreciated it’s only fair that everyone gets equal ‘air time’

The arguer

- Critical of ideas, process, other people
- Approach
  - If critical of others
    - Must be explicit –this is not appropriate
  - If critical of ideas or process
    - Discuss concerns and take a vote
    - Make sure they're not right! Must avoid *groupthink*

Non-participation

- Members that
  - Won't cooperate
  - Don't complete assigned tasks
  - Miss meetings (or persistently arrive late)
- Group need to openly discuss problems this behaviour is causing
  - Those at fault need to appreciate problems
- *At end of project group has opportunity to name those that have persistently failed to contribute*
  - *Your mark will depend on **your** contribution*

Coding and Documentation

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Coding in a group

- You're coding and documenting for others, not just yourself
- Need to agree and keep to fixed interfaces
  - Changes impact others and can cost significant time
- Don't just check main system
  - Test code at function level not just system as a whole
  - Check edge cases and consider regression testing
- Code reviews
  - Explaining code in detail can highlight problems
  - Helps everyone understand how their code should fit/ interact

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What next?

Week 1-2

- Groups allocated
  - Allocate group freely or allocate group randomly (draw lots)

  - Each group has 5 people, three groups can have 6 people
  - One group leader should be decided yourself
  - Group supervisor is selected for each group
  - The first group activity, explore initial ideas for game(Friday class)

The first group activity

- Group leader
- Name your group, group logo, group slogan, why
- Preliminary idea

Each group give a brief presentation in next Wednesday class
(each 5-10 min)

Week 2-8 group activity

- Make investigation about computer game
- Discuss and choose your subject to make
- Sketch out entire your project system
  - Theme
  - Design principle, design rule
  - Software engineer, such as feature, requirements etc.
  - Implementation plan
- Complete design report

3. Project design report

Design Report

- **Idea**
  - Investing widely and deeply
  - Interested, popular, feasible, innovative
  - Current, improve, new idea
- **Technical Scheme**
  - Framework
- **Timetable**
  - Deadline
- **Anticipated function**

Any questions?