In-class Competition

On Board Programming Contest

(On Board) Programming Contest

- Objectives
  - Promote teamwork
  - Promote team spirit
  - Simulate work environment
  - Share knowledge
  - Show off knowledge
  - Make some difficult decisions
  - Practice job interview / test skills
  - **Have some much needed fun**
  - **Earn some bonus marks**

Contest Rules

- Step 1 – Get together in 8 teams (2 project groups per team)
- Step 2 – Choose a team lead – team lead automatically gets 2 bonus marks
  - If teams can't decide a team lead, I'll chose one at random
- Step 3 – Create a set of 8-10 problems related to course topics we have covered in so far
  - How you come up with questions should be decided within the team
  - Questions should be short and concise
  - Answer required should be brief and should demonstrate knowledge/concepts learned in class
  - Leaders must email me all questions by Friday, 21-June
  - Contest on 25th and 27th June in class

Contest Rules

- Step 4 – Square off against another team in a knockout match
  - Ask 2 questions. Leader, in consultation with team, decides which questions to ask
  - Answer other teams 2 questions
  - 2 points for correct answer, 1 for partially correct answer/logic
  - Leader decides if answer is correct/partially correct. Team to explain the answer if incorrect.
    - In case of a dispute, remaining class votes to decide
- Step 5 – Winning teams move on to the semi-final and then final
  - In case of a tie, I will ask a tie-breaker question. 1st correct answer wins
  - Losing teams can still earn bonus points by answering incorrect/unanswered questions

Contest Rules

- Question and answer rules
  - Questions should be clear and concise
  - If answer declared incorrect, the asking team needs to elaborate their answer
  - In case of conflict, the non-playing teams decide the outcome of the answer through a show of hands
- If you win
  - Celebrate your win loudly but respectfully
- If you lose
  - Don't sulk. It's just a game, and you are learning anyways.
  - Remember you are still participating as you may need to make difficult decisions and can still earn bonus points
  - Remember these were bonus marks. You are certainly capable of getting an A without bonus marks! ☺

Prizes

- All contests should have prizes !?!
  - 2 bonus marks for every team lead
  - 14 bonus marks for the final winning team
  - 10 bonus marks for the runners up
  - 6 bonus marks each for the losing semi-finalists
- Who awards bonus marks?
  - Your team decides who gets how many
  - Maximum of 3 marks can be awarded per member, however the pool of total marks is fixed
  - In case of conflict, your team lead will decide
    - Lead will receive additional 2 marks from the pool in this case
- Team leads will provide the names of people in their group and their bonus marks to me

Topics Covered before Contest

- Theory
  - Domain modelling
  - Use case diagrams
  - Class diagrams
  - Object Model (Abstraction, Encapsulation, Modularity, Hierarchy, Multiple inheritance)
- C++ Programming
  - Simple data types
  - Compound data types (arrays, character sequences, strings, pointers, dynamic memory, data structures, enums, pointer arithmetic
  - Program memory (stack and heap)
  - Function and operator overloading (ambiguous matches)
  - Inheritance and polymorphism

Points System

- No laptops or electronic devices allowed
- 2 for correct, 1 for partial correct, 0 for incorrect
- 1 bonus mark for eliminated player who answers correctly (max bonus = 2)
  - Only one attempt per question
- Incorrect answer and no/incorrect bonus answer earns asking team 2 marks
- Incorrect answer, but correct bonus answer earns asking team 1 mark