Teams

- A software project is doomed without competent and well trained software engineers
- However, having the right people is not enough
- Teams must be organized in such a way that members can be productive
- Tasks can be shared in software engineering

Teams

- If one person can pick a strawberry field in ten days, then ten people can pick all strawberries in a day
- A woman can bare a child in nine months, but nine women cannot accomplish this task in a month
- Some tasks can be shared and others can not

Democratic Team Approach

- Egoless programming is the basic concept
- The team develops a group identity
  - The product belongs to all the group members
  - Decisions are made in a democratic fashion
  - Finding faults is a group effort
Democratic Team Approach

- **Advantages**
  - Positive attitude towards finding faults
  - The more faults found, the happier the team
  - Democratic teams are very productive
- **Disadvantages**
  - Cannot be externally imposed

Classical Chief Programmer Team Approach

- The team consist of a chief programmer and programmers working for him/her
- The chief programmer is
  - A successful manager
  - A highly skilled programmer
  - Someone who performs architectural design and implements any critical or complex section of the code

Classical Chief Programmer Team Approach

- The team members work on detail design and coding under the direction of the chief programmer
- Two key aspects:
  - **Specialization**
    - Each member specializes in a particular area
    - Each member performs tasks in their area of expertise
  - **Hierarchy**
    - The chief programmer directs the team
    - The chief programmer is responsible for the team
Classical Chief Programmer Team Approach

- Advantage
  - If the chief programmer is competent, then this organization works well

- Disadvantage
  - Shortage of highly skilled “programmer” and successful manager
    - Such individuals are difficult to find

Beyond Chief Programmer and Democratic Teams

- Best of chief programmer and democratic teams
  - Replace the chief programmer with
    - Team leader
      - Responsible for the technical aspects of the project
    - Team manager
      - Responsible for the managerial decisions
  - Decentralize the decision making process where appropriate