

# Capstone Design in CSE

## 컴퓨터공학 종합설계

### 3. Brainstorming

# Software Projects: the first step

- Requirement gathering
  - Oral/written interview / Survey (설문조사)
  - Questionnaire
    - A document with pre-defined set of objective questions and respective options is collected.
    - Shortcoming: if an option for some issue is not mentioned in the questionnaire, the issue might be left unattended.
  - Domain Analysis (and literature survey)
    - Every software falls into some domain category. The **expert people in the domain** can be a great help.
  - Task analysis
    - Team of developers may analyze the operation for which the new system is required. It would be helpful if **similar SW** already exists.
  - **Brainstorming: an informal debate**
  - **Prototyping**
    - building **user interface without adding detail functionality** for user to interpret the features of intended software product

# Brainstorming

- Method for creative problem solving developed by Alex F. Osborn, 1939.
  - Open communication on a table
  - Objective
    - generation of many ideas in short time
  - Rules
    - Do not judge proposed ideas (till the last.)
    - Ideas could be silly and crude.
    - More and faster.
    - Synergy by combination of many ideas

# Tools for Brainstorming and Communication

- Visualization

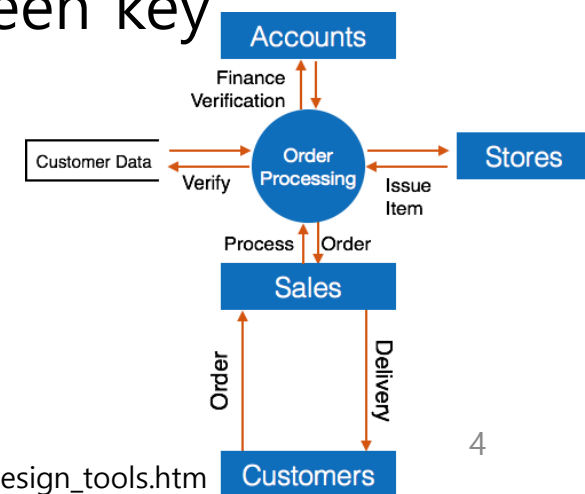
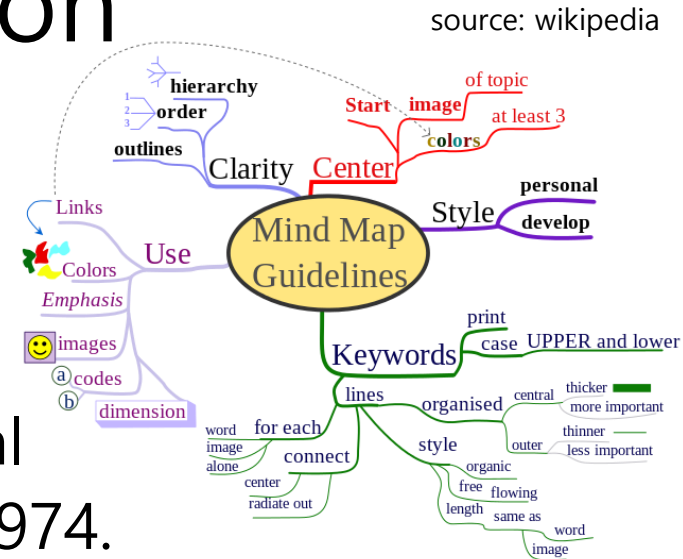
- Sketch

- Mind map

- brainstorming by an individual
- popularized by Tony Buzan, 1974.
- Diagram used to visually organize information
- Visualization of connection between key concepts (words or ideas)

- Flowchart

- Data Flow Diagram



# 1주차 과제

- 개인별 5페이지 정도의 슬라이드 준비 (자유 양식, 5분 발표 분량)
  - 관련 분야 조사
  - 후보 주제 선정: 전공지식을 활용할 수 있는 실용적 주제
  - 기존 결과와의 차별화 전략 (창의성 중요) 또는 기존 결과와 유사할 경우 목표 결과물의 의미 및 기술적 어려움에 대한 설명
  - 목표의 정확한 정의: 최종결과물에 대한 스케치
    - UI prototype, Flowchart for operations, Data Flow Diagram 등
    - 대략적인 정량 목표가 있으면 좋음
  - (선택) 본인의 능력에 대한 광고