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Assignment 3: Requirements Analysis

Problem

- Need: A method for easily submitting and collecting programming assignments.
- Purpose: To create a system which allows students in programming classes to submit programming work. Additionally, the TAs must be able to collect assignments. Finally, the instructors need to be capable of managing the course, its sections, TAs, and assignments.
- Client Base: CS Department – faculty, staff, and students

1) **Users, activities performed, relevant data and constraints:**

Instructor:
- *Activity:* viewing assignments
  - *Relevant data:*
    1) documents(.docx),
    2) pdfs(.pdf),
    3) website links (String),
    4) screenshots(.png),
    5) text submission (String),
    6) Submission Date (Date),
    7) Name of student (String)
  - *Constraints:*
    1) only certain document types allowed,
    2) limited depending on instructor's choice,
    3) all student assignments viewable

- *Activity:* leaving comments
  - *Relevant data:*
    1) Text Post (String),
    2) Date Posted (Date),
    3) Name of student the comment is for (String),
    4) Pawprint (String),
    5) Name of person leaving the comment (String)
  - *Constraints:*
    1) limit on String length

- *Activity:* assigning a grade
  - *Relevant data:*
    1) Number Grade (Double),
    2) Letter Grade (Char),
    3) Date Posted (Date),
    4) Student name (String),
    5) Pawprint (String),
    6) Points possible (Char or Double)

- ▪ *Constraints:*
  - 1) Char limit or Double range limit (0.0 – 110.00)

- - *Activity:* posting assignments
  - ▪ *Relevant data:*
    - 1) documents (.docx),
    - 2) pdfs (.pdf),
    - 3) Text Post (String),
    - 4) Date Posted (Date),
    - 5) Due Date (Date)
  - ▪ *Constraints:*
    - 1) only certain document types allowed,
    - 2) limit on String length

- - *Activity:* grouping students into sections
  - ▪ *Relevant data:*
    - 1) Group (Array of strings),
    - 2) Name (String),
    - 3) Pawprint (String),
    - 4) Section number (int),
    - 5) name of TA in charge of section (String)
  - ▪ *Constraints:*
    - 1) Array length limit

Tas:
- - *Activity:* viewing assignments
  - ▪ *Relevant data:*
    - 1) documents(.docx),
    - 2) pdfs(.pdf),
    - 3) website links (String),
    - 4) screenshots(.png),
    - 5) text submission (String),
    - 6) Submission Date (Date),
    - 7) Name of Student (String)
  - ▪ *Constraints:*
    - 1) only certain document types allowed,
    - 2) limited depending on instructor's choice,
    - 3) all student assignments viewable

- - *Activity:* leaving comments
  - ▪ *Relevant data:*
    - 1) Text Post (String),
    - 2) Date Posted (Date),
    - 3) Name of student the comment is for (String),
    - 4) Pawprint (String)

5) Name of person leaving the comment (String)
- ▪ *Constraints:*
  - 1) limit on String length
- *Activity:* assigning a grade
  - ▪ *Relevant data:*
    - 1) Number Grade (Double),
    - 2) Letter Grade (Char),
    - 3) Date Posted (Date),
    - 4) Student name (String),
    - 5) Pawprint (String),
    - 6) Points Possible (Char or Double)
  - ▪ *Constraints:*
    - 1) Char limit or Double range limit (0.0 – 110.00)

Students:
- *Activity:* Viewing previously submitted assignments
  - ▪ *Relevant data:*
    - 1) Documents(.docx),
    - 2) PDFs(.pdf),
    - 3) Website links (string),
    - 4) Screenshots(.png),
    - 5) Text Post (String)
  - ▪ *Constraints:*
    - 1) Only the student's own work is accessible,
    - 2) only certain document types allowed

- *Activity:* viewing assignment details
  - ▪ *Relevant data:*
    - 1) Documents(.docx),
    - 2) PDFs(.pdf),
    - 3) Text Post (String),
    - 4) Date Posted (Date),
    - 5) Due Date (Date)
  - ▪ *Constraints:*
    - 1) Viewable only

- *Activity:* Submitting assignments
  - ▪ *Relevant data:*
    - 1) documents(.docx),
    - 2) pdfs(.pdf),
    - 3) website links (String),
    - 4) screenshots(.png),
    - 5) text submission (String),
    - 6) Submission Date (Date),
    - 7) Name of student (String)
  - ▪ *Constraints:*

> 1) only certain document types allowed,
> 2) limit on String length

- *Activity:* viewing grades posted by instructor and TAs
  - *Relevant data:*
    1) Number Grade (Double),
    2) Letter Grade (Char),
    3) Date Posted (Date),
    4) Student name (String),
    5) Pawprint (String),
    6) Points possible (Char or Double)
  - *Constraints:* Viewable only

- *Activity:* viewing comments posted by instructor and TAs
  - *Relevant data:*
    1) Text Post (String),
    2) Date Posted (Date),
    3) Name of student the comment is for (String),
    4) Pawprint (String)
    5) Name of person leaving the comment (String),
  - *Constraints:*
    1) Viewable only

2) Identify System constraints and requirements (hardware and necessary components)

Screen size:
- 1024X600 at a minimum

Operating System:
- Windows 7, 8 or 10
- Mac OSX 10.8 or newer

Other hardware components:
- Keyboard and mouse

Memory and Processor:
- 1GB of RAM
- 2GHz processor

Browsers:
- Chrome
- Edge
- Mozilla Firefox
- Safari
- Internet Explorer

Software:
- Java
- Adobe acrobat reader
- Adobe flash player

Internet speed:
- Minimum of 512k

Additional requirements:
- Server
- Database