

CPSC 321 - Project

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Task Tracker - Overview & Goals

Overview:

A task/chore manager web app that displays tasks, both completed and uncompleted, given with estimated difficulty, due dates, and people assigned.

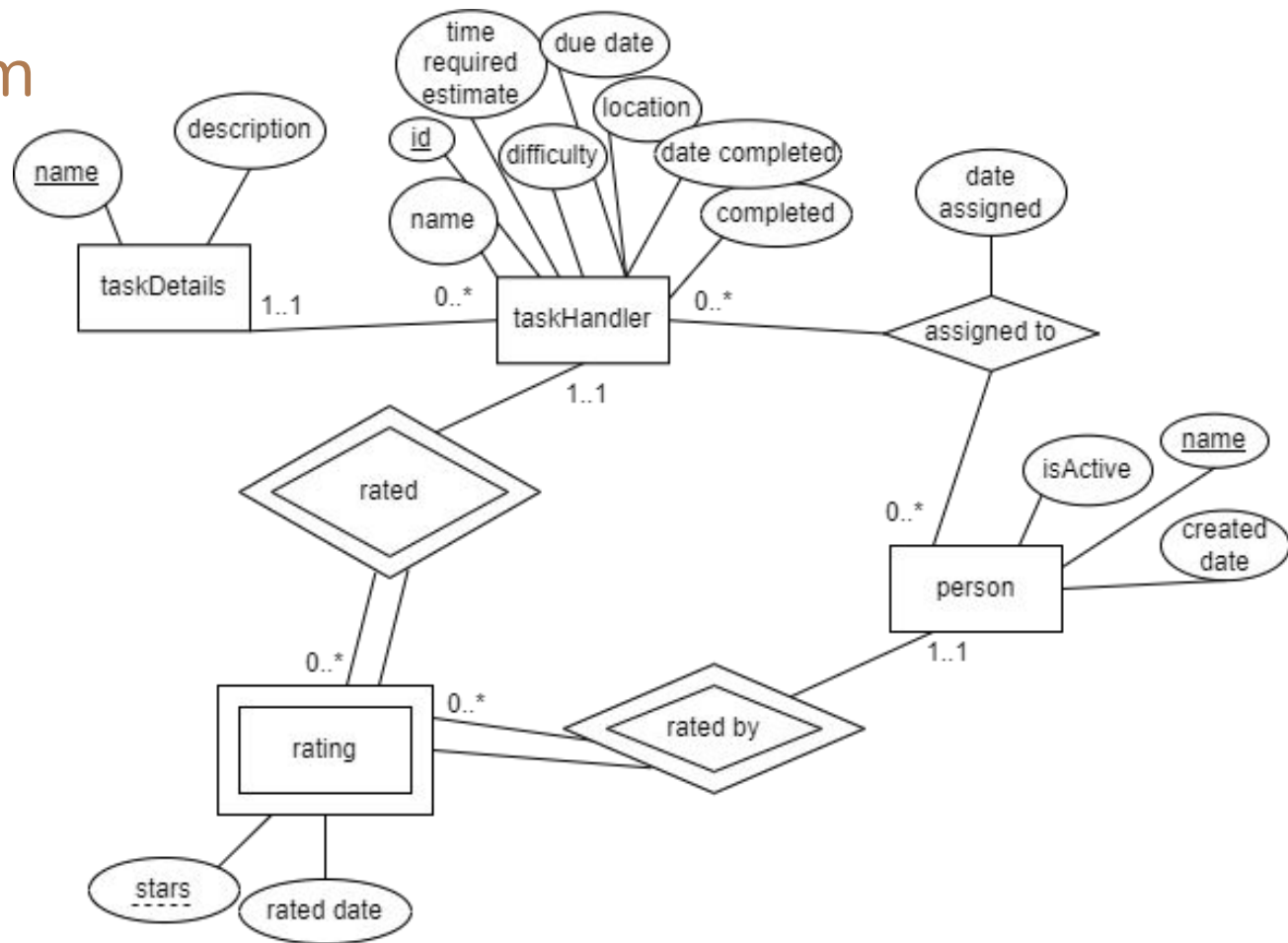
Goals:

- Users will be able to enter new tasks to the system
- Users will be able to set a task with a due date and assign people to that task
- Users will be able to update task to date completed
- Users will be able to rate others job done on tasks
- Users will be able to get a report for analyzing:
 - most / least assigned task
 - Most / least assigned person
 - Avg time to complete tasks
- Search functions:
 - due date
 - specific tasks
 - low/high ratings
 - rated by

Technology Implementation

- node.js with express and mysql
- ejs for view

ER Diagram



OLTP & OLAP features

OLTP

- Insert new task to do - task, due date, difficult, time estimate, location
- Assign person to task - inserts person into AssignedTo and updates the task in TaskHandler to be marked as assigned
- Complete task - updates task in TaskHandler to be marked as completed and adds completed date
- Add rating - inserts into Rating - reviewer, stars, and reviewed date

OLAP

- Select most and least assigned tasks
- Select most and least assigned people
- Select most and least often overdue task
- Select most and least often overdue person
- Select tasks that have been rated more than AVG
- Select person most often assigned to specific task
- Select task most often assigned to specific person
- Select AVG time to complete ALL tasks, specific tasks, specific people, specific task by specific people

Complicated OLAP Queries - 1

Overdue Tasks

```
SELECT task_name, due_date, COUNT(*) FROM TaskHandler
```

```
WHERE (date_completed IS NULL AND due_date < CURDATE()) OR (date_completed IS NOT NULL AND  
date_completed > due_date)
```

```
GROUP BY task_name HAVING COUNT(*) >= ALL(
```

```
    SELECT COUNT(*) FROM TaskHandler
```

```
    WHERE (date_completed IS NULL AND due_date < CURDATE()) OR (date_completed IS NOT NULL AND  
    date_completed > due_date)
```

```
    GROUP BY task_name)
```

Complicated OLAP Queries - 2

Most/Least assigned tasks

```
SELECT task_name, COUNT(person_name)
FROM TaskHandler LEFT OUTER JOIN AssignedTo USING (id)
GROUP BY task_name
HAVING COUNT(person_name) >= ALL(
    SELECT COUNT(person_name)
    FROM TaskHandler LEFT OUTER JOIN AssignedTo USING (id)
    GROUP BY task_name)
```

Complicated OLAP Queries - 3

Tasks that have been rated more than the average of times

```
SELECT task_name, due_date, COUNT(*) AS total
```

```
FROM TaskHandler JOIN Rating USING (id)
```

```
GROUP BY id HAVING COUNT(*) >=
```

```
(SELECT AVG(tot_rat) FROM
```

```
(SELECT COUNT(*) as tot_rat FROM TaskHandler JOIN Rating USING (id) GROUP BY id)
```

```
as co)
```




Live Demo