Assignment 3 - Grid, Restaurant Orders

COMP 321 - Programming Challenges

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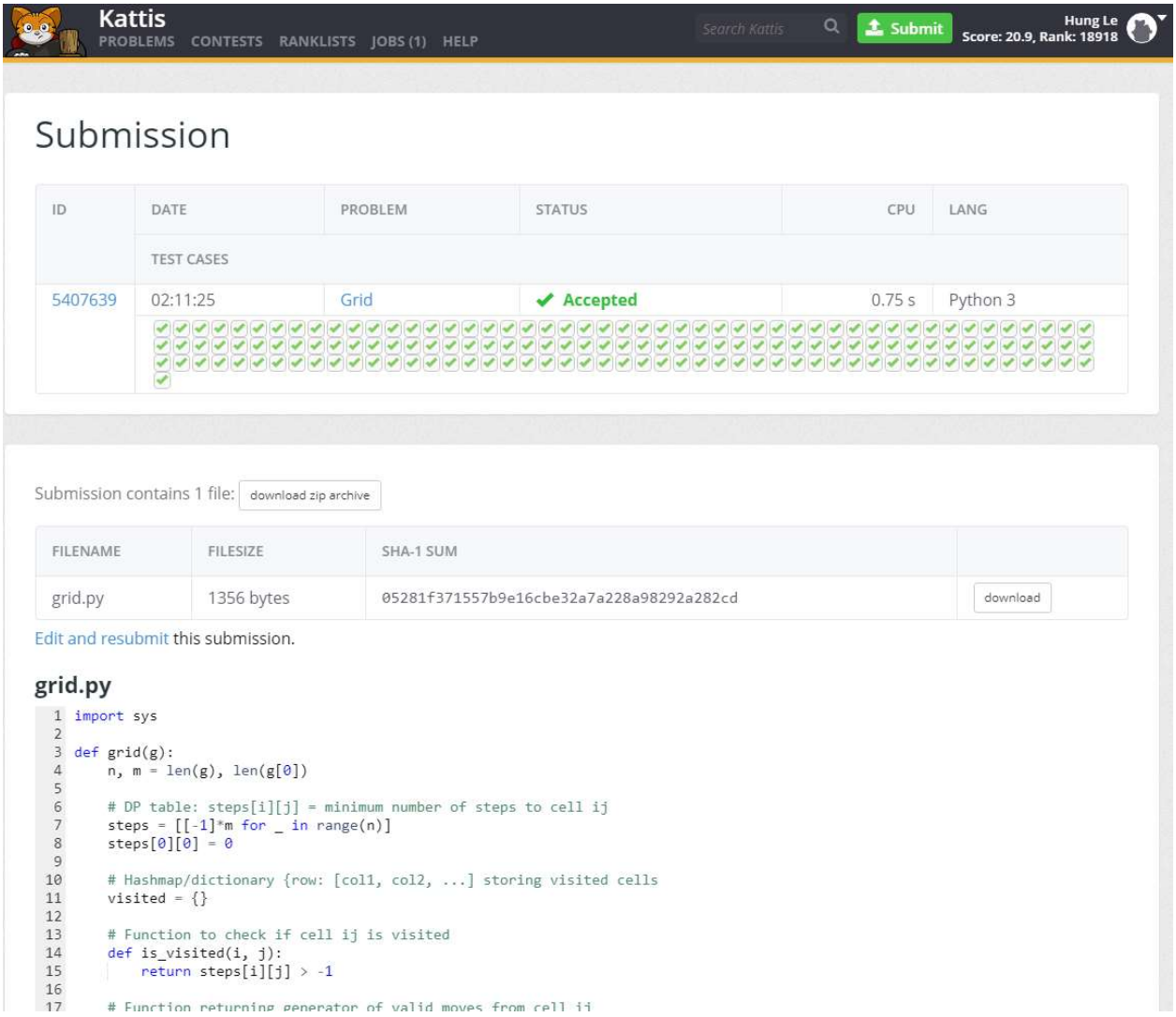
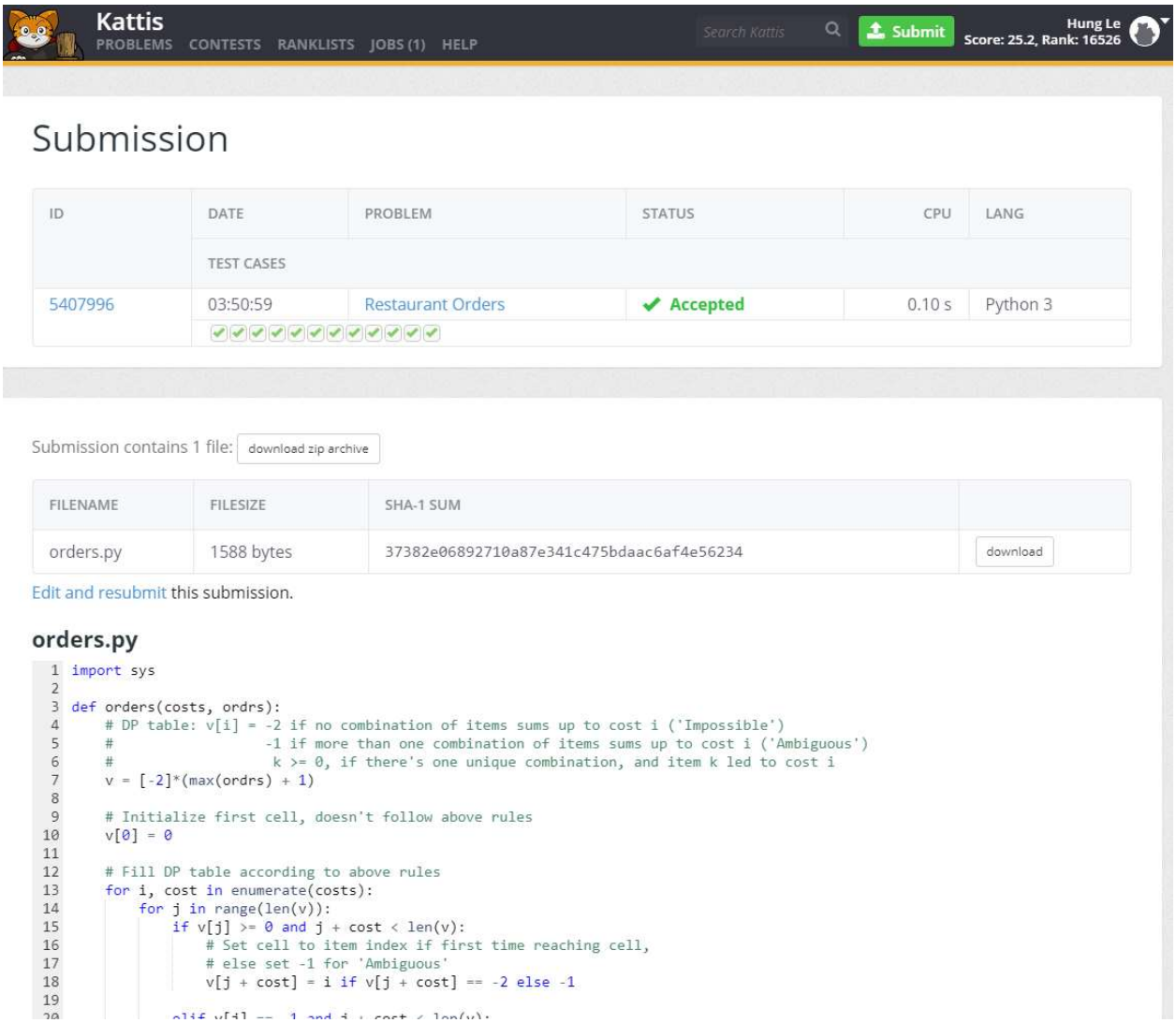
Date: February 28, 2020
Due date: February 28, 2020

Prof. David Meger
Winter 2020

Question 1: Grid



Question 2: Restaurant Orders



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FILENAME	FILESIZE	SHA-1 SUM	
orders.py	1588 bytes	37382e06892710a87e341c475bdaac6af4e56234	download

Edit and resubmit this submission.

orders.py

```python
import sys

def orders(costs, ordrs):
    # DP table: v[i] = -2 if no combination of items sums up to cost i ('Impossible')
    #                  -1 if more than one combination of items sums up to cost i ('Ambiguous')
    #                   k >= 0, if there's one unique combination, and item k led to cost i
    v = [-2]*(max(ordrs) + 1)

    # Initialize first cell, doesn't follow above rules
    v[0] = 0

    # Fill DP table according to above rules
    for i, cost in enumerate(costs):
        for j in range(len(v)):
            if v[j] >= 0 and j + cost < len(v):
                # Set cell to item index if first time reaching cell,
                # else set -1 for 'Ambiguous'
                v[j + cost] = i if v[j + cost] == -2 else -1

            elif v[j] == -1 and j + cost < len(v):
```