MESA DAY RULES 2019-2020

(FINAL)

Coding Solutions (Pilot)

LEVEL: High School

DIVISION(S): Grades 9th-12th combined

COMPOSITION OF TEAM: 2 Students per team

NUMBER OF TEAMS: Preliminary – As determined by your local Center
Regional – As determined by your Region

SPONSOR: UC Santa Barbara MESA College Prep

OVERVIEW: Students will demonstrate their knowledge of introductory computer programming principles using Python 3.

MATERIALS:

- Computer Lab or ask Center Host
- Internet browser for each team with internet access compatible with https://repl.it/
- Students must create their own account prior to competition and enroll in the MESA Day Competition Course to submit their programs for review and grading.
  - A personal google account recommended as your login, clicking the G icon.
- Timer: 60 minutes
- Once an account has been created students must enroll in this course
  - See MESA Center for Center Classroom link

GENERAL RULES:

1) This competition will have two on site components to be completed during a 60-minute window.
2) The Debugging challenge (50 points):
   a. Students will debug a program. In other words, students will correct code to get the program working again while passing all test cases including edge cases after submission.
      i. Sample output/test cases will be present but is not indicative of all the test cases (including edge case) used for final scoring.
   b. Teams will be awarded 10 points for each test case their submission Passes (P).
      i. There will be 5 test cases each test case must pass before being able to proceed to the next one.
3) The Technical Test:
   a. Students will create a program that creates the desired output.
   b. Teams will be awarded 10 points for each test case their submission Passes (P).
      i. There will be 5 test cases each test case must pass before being able to proceed to the next one.

4) To be eligible to compete in this competition at least one individual in the team must have completed at least 75% of MESA Day Python course Assignments on repl.it one week before MESA Day.

JUDGING:

1) Teams will have one single 60-minute block to complete both the debugging and the technical challenge.
2) Both team members must be physically present.
3) Only competitors, MESA staff and judges are allowed in the room. No spectators.
4) Judges will make sure that teams are logged in and enrolled in the appropriate "Course."
5) One computer per team.
   a. Teams will identify the user account that will be used for the competition to the judge(s).
6) Lead judge will publish the assignment before the designated start time. Teams will refresh page to ensure assignment is viewable.
7) Teams will have all hands off the computers until the Lead judge declares that they may start.
8) Students will have 60 minutes to complete the following tasks:
   a. To debug the given program to get the desired outputs without radically altering the code (i.e., creating a new program from scratch).
   b. To create a program that would produce the desired output(s).
9) All competitors must remain in the competition until time is complete. Teams may submit their completed programs as soon as they like but may not leave the area or perform any actions on the computer.
10) The final submission will be the last project that was submitted before time runs out.
11) **TIEBREAKER:** In an event of a tie, the team that submitted their final submission first wins.
12) All testing of code will occur within the Repl It website.
    a. Sample output/test cases will be present but is not indicative of all the test cases (including edge case) used for final scoring.

AWARDS:

- Ribbons will be awarded for 1st, 2nd, and 3rd place.
- Only the 1st place team will advance to Regional MESA Day (as determined by your Region).

ATTACHMENTS/APPENDIX:

- Coding Concepts To Know
- Coding Solutions – Score Sheet

Coding Concepts To Know

- Math operators
- User input out put
- Control and conditional statements
- Loops, iterations and nesting
- Boolean Algebra
- Lists
- Functions and user defined functions

CODING SOLUTIONS – SCORE SHEET

Student 1 Name: _____ Grade: _____

Student 2 Name: _____ Grade: _____

School Name: _____ Center: _____

Team Name: _____

Specification Criteria

- ❑ A) 2019-2020 rules were followed
- ❑ B) Program is properly labeled and commented within coding project with team members' names, grade level, school, and MESA Center:
  (10% deduction in final score if not properly labeled)
- ❑ C) At least one team member completed more than 75% of MESA Day course assignments
- ❑ D) Program submission will be under the following team members account:
  _____

Judging Criteria

Project Submissions:	**Debugging (P/NP)**	**Technical Challenge (P/NP)**
Time of Final Submission:	: :	: :
Case #1		
Case #2		
Case #3		
Case #4		
Case #5		
	Total Ps:	**Total Ps**

Total # of Ps X 10 =	Debug Sub score:		Technical Subscore:		Labeling Penalty	**Grand Total**
		+		−		=