

# DIGITAL SYSTEMS PROJECT SUBMISSION FORM



Revision: August 16, 2018

## PROJECT 5: DISPLAY CONTROLLER AND CHARACTER ROM

I am submitting my own work, and I accept that penalties will be assessed against me if I submit work that isn't mine.

Point Scale

- 4: Exemplary
- 3: Complete
- 2: Incomplete
- 1: Minor effort
- 0: Not submitted

Print Name

Sign Name

Date

| # | Deliverable | Wt | Pts | Date | Asst. Signature |
|---|-------------|----|-----|------|-----------------|
|---|-------------|----|-----|------|-----------------|

### Requirements

#### 1: Create a VGA IP and connect it to the Real Digital's HDMI IP to display solid square on the screen using HDMI

|   |                                |   |  |  |  |
|---|--------------------------------|---|--|--|--|
| 1 | Program demo                   | 2 |  |  |  |
| 2 | Verbal questions answered well | 2 |  |  |  |

#### 2: Display a character on the screen using the provided char\_rom.v file

|   |                                |   |  |  |  |
|---|--------------------------------|---|--|--|--|
| 1 | Program demo                   | 2 |  |  |  |
| 2 | Verbal questions answered well | 2 |  |  |  |

#### 3: Provide an API in C which configures the location of the character on screen

|   |                                |   |  |  |  |
|---|--------------------------------|---|--|--|--|
| 1 | Program demo                   | 2 |  |  |  |
| 2 | Verbal questions answered well | 2 |  |  |  |

#### 4: Provide an API in C which tells the display controller which character and character color to be shown on the display.

|   |                                |   |  |  |  |
|---|--------------------------------|---|--|--|--|
| 1 | Program demo                   | 3 |  |  |  |
| 2 | Verbal questions answered well | 3 |  |  |  |

### Challenges

#### 1: Reconfigurable Resolution at Runtime

|   |                                |   |  |  |  |
|---|--------------------------------|---|--|--|--|
| 1 | Program demo                   | 2 |  |  |  |
| 2 | Verbal questions answered well | 2 |  |  |  |

#### 2: Display more than one character on the screen

|   |                                |   |  |  |  |
|---|--------------------------------|---|--|--|--|
| 1 | Program demo                   | 2 |  |  |  |
| 2 | Verbal questions answered well | 2 |  |  |  |

### Extensions

#### 1: Describe

|   |                                |  |  |  |  |
|---|--------------------------------|--|--|--|--|
| 1 | Program demo                   |  |  |  |  |
| 2 | Verbal questions answered well |  |  |  |  |