JavaScript Challenges

Solve the following problems using every thing you already know about Programming in JavaScript

1. Represent the attributes of a user within a system with the appropriate data type. A user   
 can have the following attributes - first name, last name, email, username, date of birth,   
 number of friends, number of followers

2. Given an array of scores, implement a function that returns the largest number in the   
 Array

3. Write a function that returns the sum of numbers between 1 and 100

4. Write a function that returns the sum of odd numbers between a range. A range is   
 defined by a lower band number and a higher band number, eg. 1 and 10, 5 and 55

5. Given an array of objects where each object represents a student. Write a function that returns the student with the highest number e.g  
  
Example  
given array [  
 { name: ‘Jonah Jefta’, score: 63 },  
 { name: ‘Eze Edeth’, score: 96 },  
 { name: ‘Imo Favour’, score: 78 },  
]  
  
the function should return the following object  
{ name: ‘Eze Edeth’, score: 96 }

6. Write a function that takes a score and returns the grade associated with the score  
 Use this guide for mapping scores to grades

|  |  |
| --- | --- |
| Range | Grade |
| 0 - 40 | F9 |
| 40 - 50 | D7 |
| 51 - 60 | C5 |
| 61 - 70 | C4 |
| 71 - 80 | B3 |
| 81 - 90 | B2 |
| 91 - 100 | A1 |
| Any other number | INVALID |

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**You are given an array of students in a certain class, represented by the snippet below :)**

[{"firstname":"Debra","lastname":"Ingram","score":81,"age":42},{"firstname":"Chester","lastname":"Howell","score":73,"age":37},{"firstname":"Yuli","lastname":"Mcmillan","score":88,"age":43},{"firstname":"Jerry","lastname":"Zimmerman","score":62,"age":35},{"firstname":"Samson","lastname":"Blanchard","score":82,"age":33},{"firstname":"Karleigh","lastname":"Paul","score":61,"age":37},{"firstname":"Juliet","lastname":"Roy","score":79,"age":24},{"firstname":"Leila","lastname":"Waters","score":59,"age":17},{"firstname":"Hedda","lastname":"Chase","score":52,"age":19},{"firstname":"Ryan","lastname":"Talley","score":83,"age":39},{"firstname":"Fletcher","lastname":"Giles","score":60,"age":41},{"firstname":"Christine","lastname":"Hardy","score":56,"age":35},{"firstname":"Sade","lastname":"Harper","score":60,"age":22},{"firstname":"Brady","lastname":"Hewitt","score":53,"age":19},{"firstname":"Anne","lastname":"Wolfe","score":70,"age":26},{"firstname":"Wyatt","lastname":"Sweeney","score":93,"age":29},{"firstname":"Sybill","lastname":"Fischer","score":57,"age":44},{"firstname":"Donovan","lastname":"Miller","score":62,"age":24},{"firstname":"Tucker","lastname":"Frederick","score":89,"age":30},{"firstname":"Keane","lastname":"Barlow","score":99,"age":40},{"firstname":"Orlando","lastname":"Doyle","score":66,"age":16},{"firstname":"Murphy","lastname":"Short","score":51,"age":32},{"firstname":"Fay","lastname":"Norman","score":70,"age":23},{"firstname":"Leandra","lastname":"Ray","score":69,"age":33},{"firstname":"Yetta","lastname":"Marsh","score":83,"age":26},{"firstname":"Bruce","lastname":"Ware","score":97,"age":19},{"firstname":"Shay","lastname":"Shaw","score":57,"age":29},{"firstname":"Connor","lastname":"Wilkinson","score":59,"age":32},{"firstname":"Vladimir","lastname":"Ford","score":67,"age":44},{"firstname":"Beatrice","lastname":"Good","score":57,"age":39},{"firstname":"Buffy","lastname":"Wiggins","score":64,"age":20},{"firstname":"Vincent","lastname":"Hahn","score":67,"age":45},{"firstname":"Griffith","lastname":"Banks","score":77,"age":22},{"firstname":"Fallon","lastname":"Velez","score":91,"age":45},{"firstname":"Shay","lastname":"Moran","score":62,"age":42}]

Note: Copy and paste this array into your text editor

From the Array above, write functions to answer the following Queries

* Who are the oldest students in the class?
* Who are the youngest students in the class?
* Assuming the following   
  - all students who score less than 50 should NOT be promoted  
  - all students who score 50 and above should be promoted  
  - students who scored between 50 and 52 almost missed promotion  
    
  Write a function that returns an object of the structure below  
  {   
   promoted: ArrayOfPromotedStudents,   
   notPromoted: ArrayOfStudentNotPromoted,  
   almostMissedPromotion: ArrayOfStudentsWhoAlmostMissedPromotion  
  }