- 1. Let's say I have an array as shown below
  - a. array = ["98", "10", "1", "22", "8", "4", "67", "109"]
  - b. Sort them, so that we get to see them in ascending and descending order.
- 2. Define a hash called 'vehicles' that has both two wheelers and four wheelers.
  - a. two wheelers should contain different brand names
  - b. four wheelers should contain different brand names
  - c. Display all the keys in the hash.
- 3. Define a method called silly\_check() that takes a number argument and returns "The number is less than 5" if the argument is less than 5 and "The number is greater than or equal to 5" otherwise.
- 4. Add a method to\_fahrenheit() to the Celsius class that converts the Celsius temperature to Fahrenheit. The formula to convert Celsius to Fahrenheit is the temperature in Celsius times 1.8 plus 32. Hint: (temperature in Celsius \* 1.8 plus 32 = temperature in Fahrenheit).
- 5. colors = ['red', 'violet', 'blue']
  Use the colors array to construct the following array:
  [['red', 1], ['violet', 2], ['blue', 3]]
- 6. Return all the keys for the below hash: snowy\_owl = { "type"=>"Bird", "diet"=>"Carnivore", "life\_span"=>"10 years" }
- 7. numbers = [1, 2, 3, 4] Sum all the elements in the numbers array.
- 8. Create a class named 'Member' having the following members:
  - a. Data members Name, Age, Phone number, Address
  - b. It also has a method named 'printSalary' which prints the salary of the members.
  - c. Two classes 'Employee' and 'Manager' which has the properties of 'Member' class. The 'Employee' and 'Manager' classes have data members 'specialization' and 'department' respectively. Now, assign name, age, phone number, address and salary to an employee and a manager by making an object of both of these classes and print the same.
- 9. Create a class named 'Player' having the following details about the cricket player:
  - a. Data members Name, Age, Matches Played, Player Type
  - b. It has a method named 'playerDetails' which prints the details of the cricket player.
  - c. Three classes 'Batsman' and 'Bowler' has the properties of 'Player' class. The 'Batsman' has a data member 'runsScored' and 'Bowler' has a data member 'wicketsTaken'. Now, assign name, age, matches played, player type to Bowler and Batsman and print the same. If the player is a 'Batsman' then add the data model 'runsScored' and if the player is 'Bowler' then add the data model 'wicketsTaken' and print the same.
- 10. Create a file called parse.json and create a json(should be big).
  - a. Read/Parse the contents.
  - b. Iterate and display the output.

- 11. Build a code around this example of a news channel
  - a. Journalist finds the information he/she only knows from where he/she sourced this information. Source is protected
  - b. The public is only aware of the news, and the source is hidden.
- 12. Build a code around this example of Twins
  - a. Twins look the same but they showcase or hold different characteristics.
- 13. Write a ruby code in-order to determine the area of the circle whose diameter is 18 units.
- 14. Convert all the elements of an array to a single string. ["Too", "Weird", "To", "Live,", "Too", "Rare", "To", "Die"]
- 15. Define a method that multiplies two numbers together.
- 16. Write a ruby code to determine whether any given number is a perfect square.
- 17. blockbusters = [['will smith', 'i am legend'], ['brad pitt', 'fight club'], ['frodo', 'the hobbit']] Use the blockbusters array to construct the following hash:

{"will smith" => "i am legend", "brad pitt" => "fight club", "frodo" => "the hobbit"}

18. Raise a TypeError:

Age must be a Fixnum. Check for this, if it is not, throw a TypeError.

- 19. Write a ruby code to produce the following error:
  - a. "Could not add variables a (string) and b (Fixnum)"
  - b. Find the right solution.
- 20. Write a code, to define a list of elements and implement **search**, to find if the element is present and if the element is present in the left part of the list, display a message that says "Element is in the left part" and if the element is in the right part of the list, display a message that says "Element is in the right part".