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| MATH-2305 |
| Logic Puzzle Project |
| Bosses Seating Arrangement |

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| Nathan Clayton, Nathan Sanchez, Hudson Sweet  2-14-2018 |

**MATH2305 Group Project**

Choose 1 or 2 people in class to work with. (No more than THREE per group.) Make sure that everyone in class today is in a group.

Your group must turn in a report next time (Monday 2/19) that includes the following:

* List of names in the group
* Statement of the problem
* Complete solution (give this in an organized and readable form)

Five bosses of five different departments are in a meeting. Their chairs (each a different color) are arranged in a row facing a white board.

* One boss makes $6,000 monthly.
* One boss sits in a green chair.
* One boss heads the IT dept.
* One boss will take his vacation in January.
* Julian is at the fifth position.
* The boss in the red chair is going on vacation on June.
* The boss sitting in the black chair sits somewhere between who earns $3,000 and Alice, in that order.
* The 51-year-old boss makes $2,000 monthly.
* Maria is at the first position.
* The boss who is going on vacation in March is sitting at one of the ends.
* Alice is sitting next to who earns $4,000 each month.
* In the fourth position is the boss who is going on vacation in August.
* The boss sitting in the black chair earns $4,000 monthly.
* On one of the ends is the boss who makes $5,000 monthly.
* The 46-year-old boss is somewhere to the left of the boss who works at HR department.
* The boss from HR department is somewhere between who is 40 years old and Thomas, in that order.
* Nathan is going on vacation in December.
* The Sales department's boss is exactly to the right of the 46-year-old boss.
* The boss sitting in the Red chair is somewhere to the left of the boss sitting in the yellow chair.
* In the first position is the boss of R&D department.
* The oldest boss, who is 55 years old, is sitting in the blue chair.
* The boss sitting in the yellow chair is on one of the ends.
* The youngest boss, who is 34 years old, is sitting at the fifth position.
* The boss of the Marketing department is 51 years old.

Prepare a solution that clearly shows these attributes for each boss:

* Name
* Where in the row he/she sits
* The color of his/her chair
* The department name
* The month he/she will take vacation
* Age
* Monthly salary

No boss will have any of the same attributes as the other bosses.

Solution

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|  | **Position 0** | **Position 1** | **Position 2** | **Position 3** | **Position 4** |
| **Name** | *Maria* | *Nathan* | *Alice* | *Thomas* | *Julian* |
| **Department** | *R&D* | *Sales* | *HR* | *Marketing* | *IT* |
| **Salary** | *$3,000* | *$4,000* | *$6,000* | *$2,000* | *$5,000* |
| **Age** | *46* | *40* | *55* | *51* | *34* |
| **Vacation** | *June* | *December* | *January* | *August* | *March* |
| **Chair Color** | *Red* | *Black* | *Blue* | *Green* | *Yellow* |