**Soal**

*Case*

**BJ School**

As a programmer in **BlueJack Company**, you are assigned to make a program to help the teachers in **BJ School**. The program will be used so the teachers can easily manage their student data. This program will be developed using **AVL Tree**. The requirements of the program are as follow:

The program consists of **4 menus**:

1. **Add Student**
2. **Delete Student**
3. **View All Students**
4. **Exit**

* If user chooses **Add Student** (**Menu 1**):
* Ask user to input the following data:
  + **Student No.**
    - Validate that the **length** must be **5 characters**
    - Validate that the Student No**.** must **start with** ‘**BJ**’
    - Validate that the Student No. must be **unique**
  + **Student Name**
    - Validate that the **length** must be between **5** – **20 characters**
    - Validate that Student Name must be **2 words**
  + **Student Score**
    - Validate that **score** must be **between 0 - 100**
* After that, **insert** the data to **AVL Tree** with **Student No**. as the **key**
* If user chooses **Delete Student** (**Menu 2**):
* First, **show all students** using **In-Order** method
* If there is **no data** in the **AVL Tree**, print “**You have no student!**”
* Otherwise, ask user to input **Student No**:
  + Validate that the **length** must be **5 characters**
  + Validate that the Student must **exists**
* Ask user to **confirm** the deletion of student [**Y** / **N**](**case sensitive**)
* After that, **delete** the student if the user choose “**Y**” otherwise return back to main menu
* If user chooses **View All Students** (**Menu 3**):
* If there is **no data** in the **AVL Tree**, print “**You have no student!**”
* Otherwise, ask user to input **show order**. Validate that the order must be either   
  “**Pre**”, “**In**”, or “**Post**” (**case sensitive**)
  + If user choose “**Pre**”, show the data using **Pre-Order** method
  + If user choose “**In**”, show the data using **In-Order** method
  + If user choose “**Post**”, show the data using **Post-Order** method
* If user chooses **Exit** (**Menu 4**), **delete all students** in the **AVL Tree** and close the program.ss