

Dear Student,

Thank you for your interest in applying for a Software Engineer position with us. Please keep following points in mind while answering the questions:

1. We would like you to spend no more than **90 minutes** on the assessment. Though we have no way to actually verify how much time you spent on it, we would like to believe that you will honor our request.
2. Please feel free to use any programming language of your choice.
3. We are big fans of [Object Oriented Programming](https://en.wikipedia.org/wiki/Object-oriented_programming) to write software. Please use those concepts to solve the problem.Other than **correctness** and **simplicity** of your solution, solutions which apply **OOPS concepts** would be preferred.
4. Please feel free to use Google or any other tools you need in order to brush up your knowledge or OOPS concept or programming language syntax. However, please do not seek the actual solution for the problem using these tools.
5. In case you have any questions or need clarifications, please feel free to make reasonable assumptions and call out those assumptions in your solution.
6. Please email your solution to [campus2022@jalantechnologies.com](mailto:campus2022@jalantechnologies.com). **Please ensure that your code compiles and works before sending them.**

Good luck!

Thanks,

Jai

**Problem Statement:**

**Remember: Please use OOPS principle while coming up with the solution for the problem.**

Please write a program to build ticketing software for a Zoo. It should have following feature:

1. When the guests arrive at the entrance gate, the person at the ticketing counter should input the number of guests and age of each guest. The pricing depend on the age as follows:
   1. If age <= 2 years, entrance price is INR 0.
   2. If age > 2 and < 18 years, entrance price is INR 100.
   3. If age >= 18 and < 60 years, entrance price is INR 500.
   4. If age >= 60 years, entrance price is INR 300.

**Your software should issue an entrance ticket and display the total charges on the ticket based on the number of guests and their age.**

1. Before entering the Zoo, the security personnel should be able to validate the ticket i.e. they should be able to see the guests and their age associated with the ticket and manually verify the guests who are trying to enter the Zoo.

**Your software should be able to take an issued ticket and display ticket details (a line for each guest on the ticket - person, age) so security personnel can confirm the guests before letting them enter the Zoo. Ex: If a ticket was issued for 2 guest (age 23 and 25), it should display:**

*Guest 1 (age: 23)*

*Guest 2 (age: 25)*

2.1 *Bonus*:

**Your software should display a warning in case the ticket has already been used in the past to enter into the Zoo.**