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Interstellar Management System Using Java

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ABSTRACT: Interstellar Management system is a very small concept that uses astronomical data, be it about planets, stars, star systems, moons, and many others, and adds them into a repository of information which is accessible to anyone, either from the organization which implements this, or to the general public in the form of a public repository which could be maintained by any public organization.

I. INTRODUCTION

The language used for this system will be Java. There are a plethora of reasons for using Java even though it is considered one of the most difficult languages. To point out a few, consider this, being the most difficult language, it has a reputation of being also one of the most complex ones, which allowed us to use the complexity to our benefit, and in turn allow the project to be feasible.

II. BACKGROUND

The human civilization has always looked towards the stars, be it in medieval times for navigation, or in modern life to search for extraterrestrial life. A part of finding extraterrestrial life is to find star systems resembling our own, then, once you find such a star system you need to find a planet which has roughly the same parameters as our own, like the distance from the star to host liquid water on surface, atmospheric composition, and many more. This is a basic procedure to either find extraterrestrial life or to find star systems similar to ours.

III. PROPOSED SYSTEM

Due to astronomical data being complex, it is impossible to keep track of. This is where Interstellar Management System comes in, it basically allows you to type data inside of it, be it manually or using an automated system (more about that later), and then have it in a single place where another system can use it, for example machine learning algorithms analyzing the data to find the probability of the particular situation you might train the algorithm for.

IV. PSUEDO CODE

Step 1: Click on the application to start it.
Step 2: Once you open it, you will be prompted to a menu like this:
Welcome to the Interstellar Management System. Database Starting up...
Select any of the following options below:
1. Add New Information
2. Delete Stored Information
3 View Stored Information
4. Exit

For this example we will take the first option. There you will see 15 different options, refer to fig 2 for more info. Select the first field, that says asteroid. Start to input the data it prompts to you and then hit save at the end. For the purposes of this research paper, it is not feasible to explain all options here.
After you hit save, exit the program and restart it, and instead of selecting 1 this time, select 3, then go to the asteroid field, and you will see the data you entered. See fig 3 for more explanation. Subsequently, you can select any of the options you wish. First option allows you to add data, second allows you to delete data, and third allows you to view data. Fourth option gives an "Exiting Now" prompt.

V. ACTUAL IMPLEMENTATION

In this project, we will not use any AI implementation and instead program everything on a console using java, where console being the normal code execution environment available in compile programs like Eclipse IDE.

VI. RESULTS

Fig 1: Project Startup

Fig 2: The fields you see when selecting option 1.

```
Welcome to the Interstellar Management System. Database Starting up...

Select any of the following options below:
1. Add New Information
2. Delete Stored Information
3 View Stored Information
4. Exit

3

Select the type of object you want to view:

1.  Asteroid
2.  Comet
3.  Moon
4.  Planet
5.  Rogue Planet
6.  Neutron Star
7.  Pulsar
8.  Quasar
9.  Magnetar
10. Black Hole
11. Star
12. Star System
13. Galaxy
14. Local Group
15. Supercluster
1

New Record

Name of Asteroid is Ceres
Type of Asteroid is Type S
Atmosphere Availability is None
Atmosphere Weight is 0.0 Tons
Age of Asteroid is 5.0E9 Years
Mass of Asteroid is 6.0000001E15 Years
Water Availability is None
Mass of Water is 0.0 Tons
Lowest Temperature is 5.0 Kelvin
Average Temperature is 293.0 Kelvin
Highest Temperature is 500.0 Kelvin
Gravitational Field is 96000.0 Newtons
Magnetic Field is 50.0 Gauss
Velocity of Asteroid is 0.0 Kilometres Per Second
Orbiting Star of the Asteroid is Sun
Orbital Velocity is 30.0 Kilometres Per Second
Apogee of the Asteroid is 2.25E8 Kilometres Per Second
Perigee of the Asteroid is 2.2E8 Kilometres Per Second
Escape Velocity of the Asteroid is 2.3 Kilometres Per Second
Time of Self Destruction of Asteroid is5.0E9 Years
The Threat Intensity the Asteroid possesses from a level of 1 to 10 is 5.0
Do you want to enter more data? Type (Yes) to enter more data, Type (No) to Exit
```

Fig 3: When you select to view data of the particular field.

VII.   CONCLUSION AND FUTURE WORK

This project was one of the most worked projects we had ever seen, because of the sheer amount of programming required to use it, however, even though it was a lot of work, when we see the fruits we bear after seeing the project work, all the hard work is justified. In future, we can link this system to a bot which can automatically scan the internet for astronomical data and help the people learn about it in the same place instead of scouring the internet for the data, and therefore, reduce time to learn about astronomy. Also, this can be linked to an AI to increase it's efficiency and reduce compile times for certain applications of the program. To be completely honest, this project has a limitation of imagination, and code efficiency, but when those parameters are solved, you are looking at a magnificent piece of innovation which will for sure help future generations.

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