



## Mission Moon

Hello friends, this is Anita again. By now we have a fair idea about creating digital games. So how about using our creativity for designing a game that would help us to head to the Moon, albeit virtually. Yes, you guessed it right, this is going to be a space mission wherein you will be playing a crucial role.

Let me set out the background for this game which is going to be our capstone project, and I will be providing you with all the information on this to help you develop a clear understanding. So, are we ready to begin? It is important for you to know that you will be given pointers for creating your game. And in the process, you will be able to use your skills to develop an amazingly interesting game. What is even more fascinating is that in this game, you and your friends will be able to virtually head to the Moon and also understand the UN SDG #3 which is related to Good Health and Well Being. So, let us get started.

Imagine that you are entrusted with the responsibility of playing the role of a Dietician for this space mission. Remember that it is going to be a manned mission, which means there will be astronauts aboard the spaceship travelling to Moon. To survive in space for 30 days, the astronauts will require a nutritious diet. So, make sure that the diet kit prepared by you comprises of highly nutritious food items, that would help them sustain those 30 days without facing any health problems owing to the deficiency of vitamins, minerals, proteins or carbohydrates.

The kit that is put together will be carried by the astronauts to the Moon. So, it has to be thoughtfully planned and should have a combination of health bars with different nutritional components available in the pantry. Now you will have to create a nutrition scale that will measure the most abundant nutrient in the health bars before it goes into the kit. The scale should have a threshold level for each nutrient and should automatically show the status as and when the health bars are added into the kit. You will have to complete the task of preparing the kit within a stipulated time. The mission gets aborted in either of the two scenarios. Firstly, if the kit does not contain all the nutrients to its

required levels or if you are not able to complete the task within the given time frame.

You should remember that the conditions in space are really demanding. As a result, the astronauts could possibly face a lot of health issues more so due to the absence of healthcare facilities there. All this could make survival a huge challenge.

Let me help you understand more about what will be needed for the astronauts to survive during the 30 days mission to Moon. Apart from oxygen, the astronauts will be relying heavily on the nutritious food that we will provide them with. Every day, the astronauts will be consuming the necessary quantity of the health bar snack to keep them going. The kit will contain health bars made up of ideal quantities of protein, carbohydrates, water, vitamins and some minerals that are essential to survive during the mission. In the eventuality of any of the nutrients lacking the minimum threshold value, the mission will be aborted, and you will have to rebuild it all over again.

Let me summarise how each nutritional component will help the astronauts in terms of nutrition and health benefits:

Protein deficiency can sap the physical strength of the astronauts and may make them prone to bone fractures. On the other hand, less carbohydrates would make the astronauts weak and tired. Apart from proteins and carbohydrates, astronauts would also require vitamins and minerals to be active and healthy. Lack of vitamins and minerals could result in bad eyesight, poor hand eye coordination and also loss of vital functions disrupting their performance.

Essential Nutrients	Health Benefits	Deficiency and how it will affect
Protein	Muscle Building, maintaining good overall health etc.	Muscle loss, loss of critical health functions etc.
Carbohydrates	Primary energy source for living beings, helps in	Weakness, tiredness, dizziness etc.

	doing physical and mental tasks etc.	
Vitamins and Minerals	Good bone health, good vision, healthy body functions etc.	Poor bone health, poor vision etc.

Are you overwhelmed by all this information?

Now I will share some pointers to help you build the capstone game -

1. You will design a spaceship that will be take the astronauts to the moon. Th kit will have to be placed inside the spaceship.
2. You will create a pantry that will have different Health Bars. For eg – Whole wheat grain bar, Soya bar, Millet bar, Cottage cheese bar, Iron bar, Water etc
3. Research and quantify the major nutrient in each of the health bar. For eg. each 100 gm whole wheat grain bar contains 340 Kilocalories of carbs
4. Create a nutrition scale and calculate the threshold levels of each nutrient for the astronauts to survive for 30 days.
5. The player will be able to choose 10 health bars out of the given 20 items to get the right balance of protein, carbohydrates, vitamins, minerals and water.
6. In reality the player will be given 3 minutes to prepare the kit which is equivalent to 6 months of mission planning countdown time. After the countdown gets over, the actual mission will begin.
7. Having right balance of nutrition is essential to complete the mission successfully.
8. On the completion of the task, the spaceship should automatically start its journey to the moon. You will show the spaceship flying.
9. However, if the astronauts do not have the required nutrition to survive for 30 days, then the mission will get aborted and the entire expedition will fail. A message 'Mission Aborted' will get flashed on the screen to mark such an event.

Apply all your learnings and the information that I have shared with you to develop a great game. Enjoy yourself and keep getting better at game development. All the best.

Bye Bye!