Good Morning one and all Present here,  
  
I'm Sachin Apiah  
I'm Jerry Li  
I'm Kevin Huo  
and I'm Micheal Ru  
  
I would start by going back in time when all we would see is kids playing with Legos all the time, but what we see in the present world are kids holding joysticks and   
working they're eyes on a 50" Screen.   
How do we unite the long last love for legos and the present intersts in gaming consoles.?  
That's why there are "Mechatronics Engineers " !!!  
And that's why we've come up with the idea of uniting the two.  
With our Model we can enjoy the best of both worlds.   
As shown, a major problem is the lack of racing experiences in the real world and the entertainment asociated with it  
However, RC cars which should be a solution to this problem does not give a full gaming experience.   
  
Hmm,. So Basically in a form that most Engineers understand concepts better with symbols and Numbers presents to them is   
  
Video Racing Games + Legos equals to Lego Mario Kart!!  
  
Now i'D like my colleague Kevin, to enhance everyone presnt here, more on the constraints we have to face with in our project ...

Constraints

Sensor Usage – We must use the specified amount of sensors given per the assignment

Intuitive movement – Must follow commands that even a beginner would understand

Fluidity – The robot has to move smoothly while driving and through turns

Reaction of Environment – The robot must use sensors to read into data from the environment and use it somehow.

Experience – The robot must provide a Mario-Kart like experience through power-ups and sound effects

Interactivity –The robot must interact with the user through movement as well as menus /selection

Mechanically Stable – While bumping into the wall at full speed must not break the robot

Mechanically Diverse – Must be dissimilar to the standard configuration

CRITERIA

Aesthetics- Should look like a race car, something that would exist in Mario kart to enhance experience

Consistency – Should perform consistently throughout all runs

Building Difficulty – The robot should minimize the human and financial resources needed for completion

Efficient usage of parts – The robot should not include any unnecessary components

Difficulty of User Interaction – The robot should be very easy to interact with

Resemblance to Mario kart – The robot and experience that comes with it should be something that would come out of Mario kart

**Solution**

Our solution is to create a racing game simulation system using LEGO NXT robots. This will be comprised of a racecar (the mechanical designs of which will be discussed shortly) and a racetrack (composed of coloured strips representing power-ups, and obstacles that make the track more challenging for the user to navigate).

**Mechanical Design**

Discuss unique factors of each design, why sensors are placed where they are.

**Decision Matrix**

* We created a table with the 4 designs compared to 4 of our criteria.
* We mapped the table to numerical values.
* We decided on which criteria weighed more than other ones.
* This weight was then scaled from 0.2 to 1.0

**Decision**

Design 3 best fits the criteria in terms of mobility, fluidity, and several other factors.