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A24-System/Prototype Validation

Prototype results:

Our system failed in the both test. In the first time, the car was able to move, but it is out of control. The reason is that the motor controller was burnt and we could not find a substitute. In the second time, Andrew Wilhelm wrote an infinite loop, but after we fixed the infinite loop there emerged another unknown bug and we could not figure out why. The bug caused the wheels rotate randomly, and the power on wheel seems not enough. Conclusively, the car is able to move, but it is out of control now. We would try to fix the bug before the third test on Tuesday, and hopefully we can success this time. But for now, we did not meet two of the requirements specified

Fulfillment of user needs:

1. Safe:

Our ultimate goal must be to ensure the security of our audience while using our system. However, the serious, mysterious bugs happened on our car, so we were not able to control our car. As soon as we can fix the bug, this requirement may be fulfilled. However, at least for now, it is not yet satisfied.

2. Low cost:

In our experiment, the car was able to move. The car was powered by electricity provided by the rail, and it cost literally a little money. If we successfully apply the system in our life, the customer must save a lot of money. Therefore, this user need was fulfilled.

3. Always Ready:

Actually, as a mature system, it must be always ready. However, because of a series of mistakes of our team, our system seemed very unreliable. This user need is temporarily not fulfilled.

