

Tigerbots - Team Bolt #60533B
Los Angeles, California

The Video Game Developers' Process

By Nathan, Jay, Daphny, and Noah

Introduction



Many people like to play video games, including us. You may not know this but there is a lot of planning that happens before you get to play the game you've been waiting for. Did you know that video game developers use the Engineering Design Process when making their games? This is the same process we use when developing our robot for the VEX IQ game challenge.

Video Developer Career

We interviewed a game developer/tester to find out more about this career. Carlos Garcia works with console, PC games, AAA titles from big companies, and casino slot games.





Q - When testing, is it hard to remember where you left off?

A - Yes, it definitely can be. Making notes is very beneficial.

Q - How much coding is used?

A - A whole ton. The majority of the games are handled by code.

Q - How do you know if something is right or wrong or perfect?

A - Something will feel right if it lines up with the designs and is fun. That being said, sometimes it may feel right, but improvements can still be made and become perfect. Usually we don't know until after testing and making edits. Vice versa for something wrong. It may seem right, but testing things out can quickly prove that it's wrong. It can still be worked on, but sometimes it can be tossed out completely.

Q - How do you use the Engineering Design Process in your career?

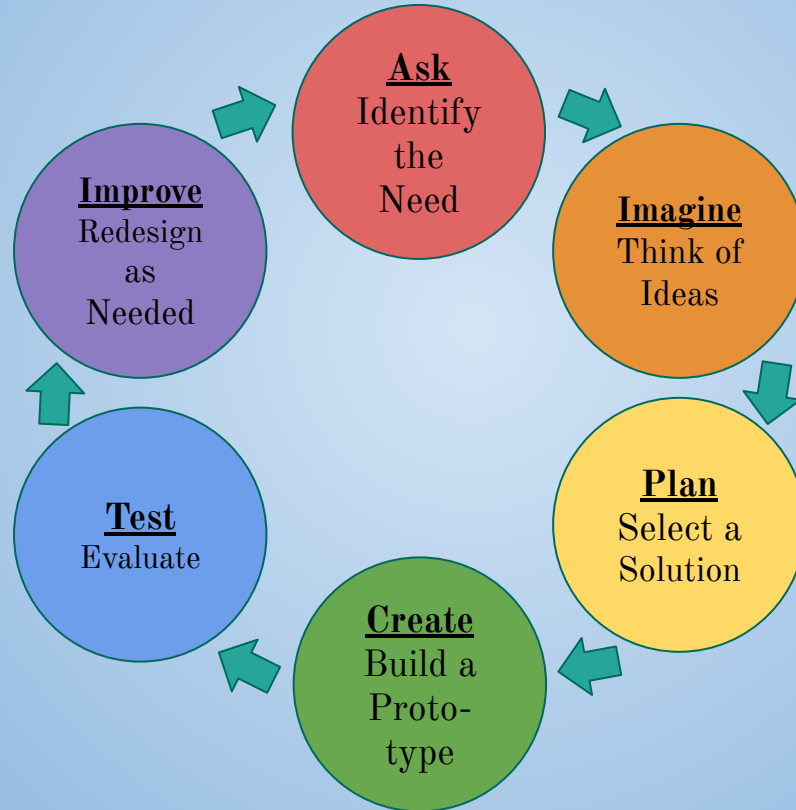
A - Game developers have to work together to make sure to develop the best version of a game so it will do well on the market. Everyone has a job to do. We come up with an idea, then flesh it out. We design it and build it, then test it to find any issues. We continually check to make sure the idea is still doable and adjust it on the way to better ideas.

We looked up what 'flesh it out' means and according to Merriam-Webster, it means to provide more information about something to make it more complete by adding details. That would be like our planning part of the design process where we would make sure our idea will be worth pursuing.

The thing Carlos enjoys most about making video games is that so many other people get to enjoy the game that he helped develop.

How do video developers use the Design Cycle?

A video game developer works with a team to brainstorm several ideas. They decide which games they will develop further.



Game developers follow the Engineering Design Process!

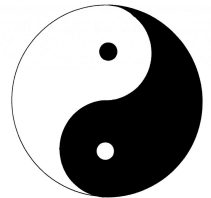


Applying Steps of the Engineering Design Process

Our team uses the Engineering Design Process. We first have to brainstorm ideas. We talk about what we are going to do by asking questions. We draw out our ideas on paper to see which idea has the most potential. Then we develop that idea by making a plan. We build a prototype. Then we test the prototype to see where it is strong or weak. After, we improve our design. The process is often repeated because there are always improvements to be made.

How does the professional approach to engineering design match or differ from the approach used by your team?

Our two approaches are very similar. Game developers follow a similar design process. Like us, they have to come up with an idea, make a plan, create it and test it. After, they modify it based on the results of the test.



How has VEX Robotics prepared us for a future career?

Vex Robotics is a program that builds leaders. There are so many skills we learn while being on a Robotics team. First, we collaborate with each other. We have to learn how to communicate so we don't yell or get mad if someone disagrees with us. We build together and help each other when we can't get a piece to fit. We test our build and we have to be honest with what doesn't work so we can make fixes. We also have to develop our problem solving skills. Things have a way of not being perfect when you first make them. It takes time to get the robot to the way we imagine. It also takes perseverance and practice. We can't give up because we find that we get better the more time we spend on something.

The Engineering Design Process helps us in life!



My dad likes to build stuff and he brings home wood blocks. I build with those and I learn how to try things and make them better. ~ Noah

EDP helps me in my own classroom with math because I think of solutions and try them out and find the best one. ~ Jay



EDP helps me in Robotics because we always have to fix problems with new ideas and test them out and modify them if we need to. ~ Daphny

EDP helps us when we play soccer. We plan who is going to stand where and if it doesn't work, we arrange them again to make the best team that can score the most points. ~ Nathan



Conclusion

Video game developers seems like a great job to have but you have to know that it takes time and dedication to make a video game. Developers don't just sit in a cubicle by themselves making one game after another. They need to follow a process. Game developers follow the Engineering Design Process just like engineers do.

For our team, following the Engineering Design Process is important, too, because it adds endless benefits to our team and the robots we make. It helps us make decisions and solve problems. It encourages us to learn from failures and create solution paths.

Credits

#60533B

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Graphics: Daphny

Resources:

<https://www.cgspectrum.com/career-pathways/game-programmer>

www.merriam-webster.com

www.teachengineering.org