Subject Line: Pencil McGee - Framerate Optimization Needed

To: John Doe (doejohn1@epic.com)
From: Sebastian Joseph (josephsebastian1@epic.com)
Date: 02/10/2024

Good Afternoon John,

I hope this email finds you well, I am contacting you because the development team has identified a grave issue with the Pencil McGee project. The game's performance is below industry standard with a framerate of around 20 frames per second which falls below the industry standard of 60 frames per second. After some investigation, the development team determined that the game engine struggles to visualize the different levels we built which affect overall performance. Fortunately, we have a solution that requires action on your end.

Problem:
To reiterate the issue is that the game is operating below industry standard, which will impact the player experience. The bug seems to be rooted in the game engine's ability or lack thereof to visualize the levels properly.

Solution:
There are two solutions to this problem. We can either move the project to a new engine which means migrating the codebase and optimizing it for the new game engine. This process alone would take anywhere from 3-6 months. The other solution is to isolate the code snippet that is causing the bug and fix it from there. I prefer to go with the second option as it would cause less delay in the development process. Here are the steps you need to take to solve the problem.

- Code Review
  - I want you to take a deep look and gain any insight into the code related to level visualization. I want you to observe and take notes on what you have seen
- Identify Problem Code
  - Isolate the code to identify exactly where the problem occurs and why it occurs. This will be essential as we continue our development cycle
- Optimization
  - Once you have identified and located where the problem occurs, implement optimization strategies that should boost the engine's ability to visualize the levels. When I looked over the code myself there seems to be an obscene amount of if statements located within the code, I believe migrating to a switch statement-based code would be beneficial in the optimization process, among other things.
- Testing
  - After completing the optimization, I want you to conduct thorough testing. This is to ensure the framerate is at a consistent 60 frames per second throughout various stress levels. So go through different performance and stress levels with the program to ensure quality.

Thank you in advance for your time and help. Your assistance is greatly appreciated and valued. If you have any questions or concerns regarding this please feel free to contact me or even schedule a Zoom meeting.

Kind Regards,
Sebastian Joseph
Lead Software Engineer
Epic Games
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ChatGPT's Copy

To: [Coworker's Name]
From: [Your Name]
Subject Line: Urgent: Pencil McGee Framerate Optimization Assistance Needed
Date: [Current Date]

Hi [Coworker's Name],

I hope this email finds you well. It's been a fantastic six months working together, and I've truly enjoyed being part of the team. However, I've run into a significant issue with our current project, Pencil McGee, and I'm reaching out to seek your expertise in resolving it.

The Problem:
Our 2D platformer, Pencil McGee, has been experiencing severe framerate issues. Despite our optimization efforts, the game is running as slow as 20 frames per second, far below our target of 60 frames per second. The bug appears to be rooted in the game engine's struggle to visualize the levels correctly.

Details of the Issue:
Pencil McGee, inspired by retro classics like Mario and Donkey Kong, features our protagonist, a pencil named Pencil McGee, who navigates levels by drawing platforms. The catch is, Pencil McGee has a limited amount of led to draw these platforms. The low framerate is negatively impacting the overall gaming experience.

Your Expertise Needed:
I've explored potential causes, and it seems the game engine might be struggling to visualize the levels efficiently, causing the framerate drop. I'm confident that with your insights, we can identify and resolve this issue.

Steps to Investigate and Resolve:

Review the Code:
Take a close look at the code related to level visualization.

Identify Bottlenecks:
Use profiling tools to identify any performance bottlenecks in the visualization process.

Optimization Strategies:
Propose and implement optimization strategies to enhance the game engine's ability to visualize levels without compromising performance.

Testing:
Conduct thorough testing to ensure the framerate is consistently at 60 frames per second across various levels and scenarios.

Your Collaboration is Invaluable:
I believe your experience and expertise will play a crucial role in resolving this issue promptly. If you think a discussion would be beneficial, please let me know when you're available for a virtual meeting.

Thank you in advance for your assistance. I'm confident that together, we can ensure Pencil McGee runs smoothly, providing players with the optimal gaming experience we strive for.

Best Regards,

[Your Full Name]
[Your Position]
[Your Contact Information]

Complimentary Closing:

[Your Full Name]
[Your Position]
[Your Company]
[Your Contact Information]

Sebastian Joseph

Professor Mastroeni

English 3091

25 February 2024

Reflection Questions

What were some similarities between your draft and Chat GPT's draft? What were some differences?

When inspecting both my draft and Chat GPT's draft, there were some similarities and differences that were noticed. Some of the similarities that were observed were the tone of the email, the tone of the email was respectful and professional which is what to be expected of an email like this. Another similarity was how both of our drafts took the route of listing out the solution in order to provide more clarity and be concise as this was a step-by-step instruction for whoever was going to be reading the email and ultimately responsible for the solution. Furthermore, we also had similar solutions to the problem I had created, showing that we both were of similar minds when it came to the solution but the details on how to come to that solution were different. Some differences that were present between the two were the details of the solution itself as previously stated. When it came to my draft, my solution was more detailed and laid out as you would expect in the real world, conversely, Chat GPT's draft was very vague and provided a solution that didn't exactly solve the problem but would put the recipient on the right track for it. Despite many efforts to try to make the solution more detailed, it was just a struggle with Chat GPT that I was not able to overcome.

Were you tempted to double-check your draft with Chat GPT?

After the construction of my email draft, I took it upon myself to double-check my draft and make sure it was of quality. Throughout the entire construction of my draft and after I was not tempted to check with Chat GPT. I already rarely use the tool but in this assignment especially I have experience writing professional emails so I did not feel the need to do so. I leveraged the experience I did have to complete the assignment without the use of Chat GPT. Additionally, there have been many cases of Chat GPT being inaccurate and at times detrimental to the assignment you are trying to complete so I rather not take the risk.

Which draft do you believe is more effective? Why?

I am of the opinion that my draft was more effective, the reason why I feel this way is because my draft was more helpful, detailed, and concise in comparison to Chat GPT's draft. In addition, I felt as if I had labeled detailed steps and provided a proper solution to the problem on hand. Unfortunately, I tried working with Chat GPT to see if they could improve their draft but after many tries to work with the AI, Chat GPT never really gave specifics on how to solve the problem, and the email felt too generalized even though I provided the full prompt and the context of the problem multiple times. The draft you see from Chat GPT was after many unsuccessful attempts to have it produce a better draft. This is why I believe that my draft is more effective.