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BSIT-BA 4101

**Seven Issues**

* **Project management difficulties**- can result in missed deadlines, a lack of focus, and ineffective resource utilization. For projects to stay on track, effective project management procedures are crucial.
* **Collaboration and team dynamics**-are key components of the software development process. Different communication styles, skill levels, and competing priorities might present difficulties.
* **Version Control and Code Management**-When managing code changes is not done properly, conflicts and mistakes can result. Collaboration is made easier and code integrity is maintained by implementing version control systems.
* **Technology Obsolescence-**Due to the rapid speed of technological advancement, tools, libraries, and frameworks can quickly become obsolete. Maintaining outdated technology might result in compatibility problems and a competitive disadvantage.
* **Security issues**- It is essential to ensure the security of software programs. Failure to correct security flaws may lead to data breaches, a decline in user confidence, and legal repercussions.
* **Lack of documentation-**can make it challenging for new team members to comprehend the codebase, extending onboarding timelines and raising the possibility of errors.
* **Scalability and Performance**-As user bases and software application sizes increase, scalability and peak performance are essential. User discontent, sluggish performance, and downtime can all be caused by neglecting these factors.

**Environmental issues that mainly affect the professional efforts:**

* **Technology Obsolescence**: Rapid technological breakthroughs can produce a constantly shifting environment for software development. New tools, libraries, and frameworks might be difficult to keep up with, and it takes time. The rapid rate of technological advancement and the necessity to adapt in order to remain competitive have an impact on this environmental issue.
* **Security Issues:** Cyberattacks, data breaches, and other security concerns are common in the digital world, and the environment in which software operates is particularly vulnerable. To preserve the reliability of software programs and safeguard user information, these problems must be resolved.
* **Scalability and Performance:** Software systems must be able to withstand greater loads while retaining their optimal performance as they add users and data. As the number of users increases, the environment in which the software runs may change, placing strain on its scalability and performance.

Environmental issues that affects the managerial efforts:

* **Project management Difficulties:** This problem significantly affects management efforts. Setting clear goals, allocating resources, and ensuring that projects are finished on schedule and under budget all depend on effective project management. Project managers are in charge of developing and carrying out plans, keeping an eye on developments, and making necessary adjustments to keep the project moving forward.
* **Collaboration and team dynamics**: are two areas in which managers are crucial to promoting productive cooperation and controlling team dynamics. They must help team members who have various communication preferences, levels of expertise, and priorities to communicate effectively. Additionally, managers must resolve disputes, promote teamwork, and guarantee that the team is cooperating to achieve the project's objectives.
* **Version Control and Code Management:** Although developers may be more directly impacted by this problem, managers are nonetheless in charge of putting version control systems in place and making sure that appropriate code management procedures are followed. This promotes collaboration, preserves code integrity, and avoids conflicts that can result from poor code management.
* **Lack of documentation**: Managers must make sure that the right documentation standards are upheld. Sharing information, integrating new team members, and preserving code quality all depend on clear documentation. To guarantee that documentation is developed and updated often, managers may need to set up procedures and devote resources.