1. Describe the XP concepts of refactoring and pair programming in your own words.

XP encourages refactoring -- a construction technique as well as a design technique. Refactoring is the process of changing a software system that does not change the external behavior of the code but improves the internal behaviorStructure. A core concept of XP is that design happens before and after coding begins. Refactoring refers to the continuous design in the system construction process, and a key concept in the coding process is pair programming. XP suggests that two people work together on a computer workstation, creating code for a story. This provides oneReal-time problem solving mechanisms (two heads are usually better than one) and real-time quality assurance.

1. Write 5 software tools that helps to Collaborative Development Environments. Provide suitable links for each tools

Google drive: <https://www.google.ca/drive/>

Onedrive: https://onedrive.live.com/about/en-ca/

Lenovoyun: https://yun.lenovo.com/

Fang cloud: <https://www.fangcloud.com/>

Youdaonote: <https://note.youdao.com/>

1. Visit the Official Agile Modeling site and make a complete list of all core and supplementary AM principles.

|  |  |
| --- | --- |
| **Core Principles** | **Supplementary Principles** |
| * [Assume Simplicity](http://agilemodeling.com/principles.htm#AssumeSimplicity) * [Embrace Change](http://agilemodeling.com/principles.htm#EmbraceChange) * [Enabling the Next Effort is Your Secondary Goal](http://agilemodeling.com/principles.htm#EnablingTheNextEffortIsYourSecondaryGoal) * [Incremental Change](http://agilemodeling.com/principles.htm#IncrementalChange) * [Maximize Stakeholder ROI](http://agilemodeling.com/principles.htm#MaximizeStakeholderInvestment) * [Model With a Purpose](http://agilemodeling.com/principles.htm#ModelWithAPurpose) * [Multiple Models](http://agilemodeling.com/principles.htm#MultipleModels) * [Quality Work](http://agilemodeling.com/principles.htm#QualityWork) * [Rapid Feedback](http://agilemodeling.com/principles.htm#RapidFeedback) * [Working Software Is Your Primary Goal](http://agilemodeling.com/principles.htm#SoftwareIsYourPrimaryGoal) * [Travel Light](http://agilemodeling.com/principles.htm#TravelLight) | * [Content is More Important Than Representation](http://agilemodeling.com/principles.htm#ContentIsMoreImportantThanRepresentation) * [Open and Honest Communication](http://agilemodeling.com/principles.htm#OpenAndHonestCommunication) |

1. Members of a software team and their customers may be geographically separated from one another. Do you think this implies that geographical separation is something to avoid? How to overcome this problem?.list few technology to overcome this problem

If software team and their customers can talk face to face, that’s the best. But I don’t think geographical separation has to avoid, lots of countries have the best software technology, in Western like USA, Canada, UK German, In Eastern like Japan, Singapore, China, India; customers cannot avoid it, so many software experts and their customers cannot being in a common room to conversation. However, the experts can use video chat.

Methods:

Skype: when people do brainstorming and weekly planning, voice is more efficient than text

Hipchat: a great group chat tool where people basically discuss things and share information

Pragmatic.ly: easy to plan, track progress and communicate.