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Software Program Agile vs Waterfall

The company that I work for would develop a software that specializes in emergency service. This software would be similar to Life-Alert where if someone is in an emergency they can press a button and call for first responders. If an elderly person was having a heart attack and they pressed the button emergency services will be contacted and a text message or automated voice call will be sent to an emergency contact/loved one. Emergency services will arrive at the scene of the emergency and a loved one will know the situation and arrive so there can be a friendly face at the house or at the hospital. Also it can sometimes take hours to find the contact information needed to contact the immediate family. This software will have the phone numbers stored on it so that when an emergency does happen the loved ones are contacted and know about the situation. The message will be say something like, “*THIS MESSAGE IS TO INFORM YOU THAT (Fill in name) HAS REQUESTED EMERGENCY SERVICES. PLEASE GO TO (Address) AND MAKE CONTACT WITH EMERGENCY SERVICES…IF EMERGENCY SERVICES HAVE LEFT BEFORE YOU ARRIVE PLEASE GO TO (Hospital name). THANKYOU.”* The goal of this program is to make sure people get help when they are alone and that their loved ones know about the situation and have time to react.

There are two approaches to making this software. There is waterfall and agile which are both different and have their advantages and disadvantages. With the waterfall method the customer hires the software development company to make the program which can take weeks or months. Software developed using the waterfall method consist of six steps. Step one is creating a requirement document, which is a document describing the purpose of the software and what details need to be a part of it. The requirements document has specific details that are needed to be put into the program based in the customer’s needs. The document is a wish list of what the customer wants. The second step of the waterfall development is analysis. Analysis is when the developers start to see what is needed in order to make the software look. This includes what features are going to be needed, what kind of coding language, what needs to be done to fulfill the requirements document. The analysis period helps developers know what they are going to do for the next stage and so they are prepared to develop this new software. The third step of waterfall is design. The design phase includes how the software is going to look and work. This shows what the software will look like and exactly what different features will be placed and where, as well as the specific things the customer wants. Step four of the waterfall model is the coding phase. This phase is when you develop the software in the specific code selected during the analysis phase. The coding is when the actual software comes to life and the plans from the previous phases are built. The next phase of waterfall is testing. The testing phase is when the developers test the written code to make sure everything works. Testing allows people to report bugs in the software which is then fixed by the programmers to make the software more efficient and reliable. Testing is an important part of the waterfall model because it allows the developers to fix mistakes in the software before the last phase which is deployment. Deployment is when the software is finally finished and the bugs are all fixed. The software is then released to the customer and is put to use. These are the six stages of the waterfall development model.

Agile is another software development method and is different from waterfall. It is different from waterfall because it encourages more interaction between the development company and the customer. With agile development instead of creating a requirement document, you have more contact with the customer. This constant contact with the customer helps understand if the developers are going in the right direction when building the software. There are about 12 principles that are involved with agile and most of it has to deal with meeting people face to face and understanding what is needed, what needs to be improved, what is completed, and what is required to make the software work. One difference between agile and waterfall is that with agile the developers are constantly updating and improving the software while it’s in development and even after. This is why agile software development is preferred over waterfall because bugs in the software are constantly being fixed and there is improvements in the software. Also the development of the software is created in less time because agile encourages more communication with the customer and the development team. The more communication there is between the customer and the development team, the more likely the software will be what the customer wants and that it will run efficiently. The customer would rather have a software look and function the way they want rather than have no collaboration with a development team following a waterfall procedure. If there is a mistake or a customer doesn’t like the way the software looks, they can easily contact the development company and change it before the software is officially finished which is why agile is so convenient. If it were waterfall the software would be finished after weeks of coding and designing and you would have to start the process all over again because there are different requirements. Agile allows more team communication and efficiency. The more communication there is between the group the more discussion there is on what problems need to be fixed and what other steps are needed to perfect the software and keep the customer happy. Another part of agile development is the backlog. The backlog is a document that lists different features that the customer wants and on the backlog there is a ranking of how important that feature is. This is better than the requirement document in waterfall because it allows the developers to know how important the feature is. Based on these details it is evident that agile is the better way to develop software.

After looking at the waterfall and agile procedures for developing software, the best way to develop the software my company would want would be agile. My company would choose agile because we want the software to be efficient and successful. Agile offers more communication with the developers which is a great thing because the software is going to be used for people. We want to ensure that the software is going to work and will help save lives and notify those that the person they love is in danger. The backlog is also a great thing that comes with agile because we can rank how important each piece is and make sure there is hard work going into those specific pieces. If my company decided to go for waterfall it can take months for the software to be developed and we wouldn’t be able to see the progress and declare our opinions. When the deployment stage comes into effect and we don’t like the software that was developed, the process will start from the beginning and it would be a time waste. Agile takes a shorter amount of time and allows us to be a part of the development process. With agile the software can be deployed faster and will be updated constantly so that the software can become more and more efficient. Agile development will put the software out there faster and more effective when saving the lives of those who are in danger and can unite the family together in the time of tragedy. Agile is the ideal software development tool to get better results.