**Instructions**

 Agile and Waterfall are similar in that they have similar goals:  to produce high-quality software applications that clients are happy with. They perform the same activities:

•Collecting requirements

•Designing

•Developing

•Testing

•Deploying

 However, they are very different in the way that projects are completed. Compare the two methodologies and summarise the pros and cons of each.

Waterfall project management is a model in which work is completed in a linear fashion. Each stage of development must be completed before the next one can be started. It’s much easier to define the project from the start, good for small teams/projects. Quite suitable for testing as waterfall involves a lot of documentation which can be good for organising. Waterfall methodology is well documented, and easy to manage. Unlike agile, all features are delivered together at once in a lump sum at the due date. It is linear only, meaning if one stage is delayed, everything is delayed. This can be a big problem with larger or more complex problems with lots of small tasks going on. For projects such as those, agile environments will be able to handle them significantly better as it is such a flexible workflow. Waterfall gives strict structure, excessive documentation and is not very flexible.

Agile is a broad term for a range of project management frameworks such as Scrum, Kanban, and eXtreme programming. It involves working closely with the client and working in short sprints. Frequent contact with client allows for frequent changes/fixes, revisiting tasks for better results is encouraged, this is not really an option with Waterfall. Agile ensures that projects meet all requirements, this ensures customer satisfaction. Agile is heavy on teamwork and with a good team can make all the difference. It does not have a strict schedule like waterfall so if not managed correctly or the team leaves enough lead or lag time, it can cut close to deadlines. Agile requires heavy reliance on each member of the team, so a weak link can waste time and money, this isn’t the case with waterfall as the lower flexibility has its benefits. Agile can be time consuming and so can delay project delivery. Agile teams are flexible with no fixed process which in some cases can cause chaos and disfunction. But in most cases will allow for a great and flexible environment that will function better than a waterfall environment under most scenarios.