My IT project idea is to build a homework chat bot which will assist year 7’s to year 12’s through their questions relating to homework 24/7. This project will assist students in completing their homework or only assist them in taking the right steps towards completing the set homework. This application/chat bot will be able to assist the students throughout the day and night even when their teachers are not able to respond allowing students the freedom to ask questions whenever necessary. This chat bot will also have a restriction feature which will lock the student’s phone for a certain time limit which would not allow them to get distracted by different applications on their phones.

This idea is interesting and useful as according to the ABC only “13% of parents [say] they spent seven hours or more reading to their children or helping with their homework.” This app would help the rest of the 87% of children who do not get help from their parents and require it. The Homework Assist Chat bot would make it so that even if these children do not receive the help, they need from their parents they would be able to talk to a person online who will be able to guide them through their struggles. Australian Institute of Family Studies research found that children as young as 10 were doing almost two hours a week worth of homework that did not involve a computer. This application would help minimise the time spent by these children in doing their homework as these struggles and questions would be explained and answered to them.

This applications features include a variety of tutors which would be able to provide a detailed steps and instructions to the students in real time. A chat bot which would answer questions when tutors may not be available e.g. at 3am or 2am. A phone app restriction feature which would lock social media applications for a duration of time selected by the user and only unlocked once said duration has been finished. The application would contain a selection of tutors for various subjects and the student would be able to choose which tutor he/she requires in order to complete the task necessary. This tutor would then be able to communicate to the student in order to solve and explain the steps required to solve the question. Through the chat the student would have the option to upload his questions or be able to share his screen if on laptop. The student will also be able to video call the tutor if required. The app will contain some free tutors however to gain access to expert level tutors such as university lectures and high school teachers the students will have to purchase these tutors for a small cost. Furthermore, the application will contain a chat bot that will be able to answer questions when the tutors are not available. Although the tutors will be online for most of the day if the student needs help at a time late in the night e.g. 2am the automated chat bot will be able to answer the questions. The automated bot will not be able to answer all the complicated questions the students may have however it will be able to answer basic and easy questions that may seem difficult to students. A discussion panel will also be accessible to students that are in the same year level to discuss similar questions that they may have. Additionally, with these features the application when used on a mobile will have the option to lock social media applications or applications that the user deems to be distracting to them. Once these apps have been selected the user will have the option to lock these apps for a certain time limit in which the apps will be not usable. As well as these features the students can add their peers into a chat with a tutor or a video call. This feature will allow students to work in their groups with a tutor and solve their group problems together. The students will be able to add up to 4 people in one of their chats with the tutor and up to 8 when in a video call.

The software and hardware required from the student’s side would be a compatible laptop or mobile device or a desktop. Furthermore, the students would require a mic and video camera for the tutors to engage with the students in the video call. A server would be required for the chat bot to store the pre-written answers which have been coded into it. We would also need to develop an AI which would be able to read and answer the questions entered by the user. Additionally, we would require a database which would contain all the tutors experience and their expertise in subject fields.

The skill that would be required to build my project would be to be able to code python/java, be able to build a database that is accessible to the application and be able to code a chat bot AI. Being able to code java/python is a skill that is needed as most chatbots are built on these codes as they are compatible on a web browser. This skill is not too hard to obtain as through practice and experience it will be easier to code. Furthermore, the skill to code an AI is required however it is harder to find skilled members who will be able to code AI. It will be easy for the students to obtain a mic, video and laptops in order to get on to the website and connect to video chats.

If the project is successful, the outcome will be an application which allows students to get help from tutors online whenever necessary. The original problem of students needing help but cannot obtain it will be solved as instead of emailing a teacher and waiting for hours for a reply/not getting a reply till the next day the students will be able to receive help immediately. This development will have an impact as it will help students complete their homework and be able to receive help when needed.