|  |
| --- |
| 1. What did you contribute to the group? List skills as well as concrete tasks (e.g. presentation writing skills, coding the input handler). (1 page including figures OR 550 words)  Team Work  Throughout the project I did the most in the team to encourage everyone to contribute to group discussions. I was very mindful that two team members were not English and may have had difficulty following when the pace of speech elevated during meetings. I repeatedly asked if they understood and were in agreement or wanted to contribute something different. I think it was recognised I was trying to make an extra effort as it was me who queried questions outside of meetings and received personal e-mails when clarification was required.  There were a few issues when deadlines started being missed. The issue was mainly that group members were working separately on overlapping tasks rather than communicating to work as a team. From March onwards I took an increasingly leading role, organising more frequent informal meetings, setting deadlines, and delegating tasks for outstanding work. I would consider myself primarily responsible for the co-ordination of completing the presentation, documentation, and the final report. From the outset I was hopeful that the group would award each other equal weighting, and I think I had an important role in ensuring that everyone was given the chance to do a fair share.  Coding  For me the coding was split into two phases. In January I wanted to learn PHP and MySQL and created our initial database and PHP test page on the university’s server. Although this was basic, learning how to use this for the first time was time consuming but enabled me to pass that knowledge on to the rest of the team. In February other team members became concerned they had not been involved in the coding, so I agreed to concentrate on the documentation whilst the algorithm was constructed.  After the code was demonstrated at Easter I made extensive optimisations. Originally the MySQL database had a row linking it to every other station, meaning for ten stations 90 rows were required for every journey time. I rewrote the MySQL and PHP so each station was only concerned with its immediate neighbour; meaning only nine rows are now needed. Another improvement was that in the original code the concept of switching trains and users waiting at stations did not exist. I wrote the code that implemented this entirely. With the exception of the Dijkstra’s algorithm class, I would estimate that 80% of the final PHP code submitted was written by me. The SQL database was solely written by me as the first version did not meet the requirements set.  Documentation  In the final report I wrote two sections, the technical summary and the group work summary. In the documentation I wrote the colour blind section, the website stress test, external testing, Neilson Heuristics, the PHP and the MySQL summaries. As a group we shared the writing of the requirements document and design specification. Following an agreement made earlier in the year, I was also the person who did the final proof read and submitted all documents to Ness.    2. Describe three things you feel you personally did well. (1 page including figures OR 550 words)  Co-ordinating  I held the greater responsibility for the co-ordination of tasks that led to the completion of the code, documentation, and presentation to a very high quality. I took on this role because of a missed deadline which looked as though it would delay any development of the website throughout Easter. Because my work ethic and quality of work had been high up until this point the team responded very well to me delegating tasks. The change in group dynamics was immediate, the outstanding work was finished within four days of my involvement and informal meetings became more regular and more focused. All deadlines were hit from then on, our coding was virtually complete by the start of April and we had the first draft of the documentation and group report finished a week before the deadline. I believe I demonstrated strong organisational skills to split the work evenly and assigned tasks based on peoples individual strengths.  Coding  I was very pleased with my development of the PHP and MySQL code to make the train network run with a proper timetable, introduce transfer delays at stations, and display return journeys. Initially a team member had said it would not be possible to do this and was unwilling to spend time on it, but I was positive that it could be done. This was my first attempt at PHP and each line required lengthy research and repeated trial and errors. The routeFinder.php file which returns the result was modified over 3000 times in a three week period before it finally worked. It was that determination to making the code (and other parts of the project) as perfect as possible which made the quality of our work so high. What made this most satisfying for me was that during the presentations we realised that we were the only team who had been able to implement a timetable.  Human Computer Interaction  I wrote in the design specification about Nielsen’s principles and how they should be applied throughout the website, and some of the strongest features we implemented were suggested by me. The collapsible box on the results page, to minimize the amount of information displayed to a user, was a feature which impressed colleagues during external testing (note – the box was coded by another team member). Another feature I created was the drop down boxes for the input selection to reduce the possibility of a user encountering errors on the website. It was pleasing to receive positive feedback on our HCI from the lecturer during our presentation.  I was particularly happy with the template scripts I created to add and remove stations from the database. Implementing the timetable increased the number of rows required in the database and initially we were concerned about how long it would take a user to enter a new station with every possible leaving time. With the template script someone without MySQL knowledge can add a station with full timetable with only 11 text changes. The templates also meant the group did not have to build an online GUI to add/remove stations, as the team did not believe we could replicate anything online more simple.  3. Think about the things you personally did not do so well. Identify three areas in which you would seek training as part of your continuing professional development. (1 page including figures OR 550 words)  Leadership  A negative to co-ordinating the group was that it led to an overreliance on my opinion. This led me to feel that at times certain members of the team were reluctant to do a task unless I was involved in every aspect of their decision making. This was a hindrance as frequently a section would be delayed whilst they waited for an e-mail response from me, which led me to be involved in an unequal portion of the work. I attempted to address this by motivating the person to trust in their own ability but ultimately I failed to accomplish this. Delegation was difficult at times; as I attempted to lead I tried to keep a high energy to the project with differing success. Project management is an area that I want to progress into and leadership skills are an area I will be seeking training in.  Problem solving  A disappointment in the project was that the Dijkstra’s algorithm used was not created by the team. We chose initially to use someone else’s code due to the complexity as we had no experience with web development. However after I scripted the timetable, I attempted to write my own algorithm. I was close to implementing it but as more complex journeys were added to the train network more bugs appeared and ultimately I had to abandon this due to time constraints. Aside from coding inexperience, the failure was due to an incorrect approach to the problem.  I attempted to solve the algorithm as a whole, working out how two inputted stations could find each other across any network in the fastest way. With hindsight, had I segmented the task into two chunks, first building arrays of every direction a train can travel from one station to any other station, then secondly, calculating every minute and delay cost between stations in the array, then selecting the minimum journey time may have been possible. This was my first project of this scale and I have already learned valuable lessons from it. Before I attempt another project I will spend more time producing diagrams, in order to better comprehend what I am attempting to solve, and where possible consult those with more experience or better problem solving skills.  Project planning  At the beginning of the project I was aiming to build something complex, far beyond the specification of what was required. The first reason for this was an underestimation of the time that the project would take to complete, and the second an eagerness to impress in my first coding project. The group mentor warned us to focus on the basics, but I feel myself and the group didn’t truly understand this, resulting in wasted discussion time in the first few months and in February having to stop and re-evaluate the project. It was an important lesson in concentrating on the minimum requirements, and I was the first time member to call for stopping development of any advanced features. Next time I undertake a project I would apply this and seek as much feedback as possible from those who have had experience with similar ventures.  4. Identify the main thing the group should do differently if you were able to redo the project (1/2 page or 250 words). |
|  |

In the first few months during group meetings when a new proposal was suggested it was often met with silence, and there was reluctance to commit or contradict another team member. My feeling is that the reluctance to communicate at this stage was in case the idea turned out to have been the wrong decision. The group struggled at times by being too agreeable which led to the missed deadline as we had been too sensitive to properly monitor how individuals were managing their work load. When I tried to co-ordinate the tasks I didn’t know if the group was in agreement with my direction or simply not wanting to oppose. I think had we challenged each other more we would have delivered a better end product.

When deadlines became tight it was apparent that the language divide meant some team members became less confident inputting their own opinion. This is a failing of the entire group and meant the most influence came from the English members. I think asking for proposals in a written format before each meeting to allow time to absorb, and arranging written responses would be fairer.

There was concern that I and a colleague were dominating the coding up till February so we agreed to stop to allow the others to develop the code. With hindsight we should have created a Gant chart and assigned specific roles before Christmas to avoid this. The situation arose primarily due to the delay in our web development modules.