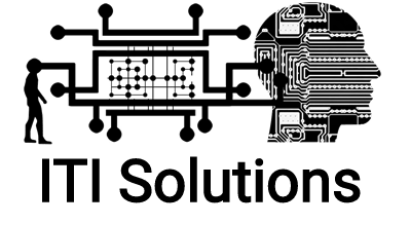
**Milestone 2**



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Evan Guest Beryon Clark

October 14, 2019

Edenbridge Time Tracking and Scheduling Project

Software Name: Schedule ED

Client: Edenbridge Family Services

Client Contact: Rachel Frantz

**Client Signature:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date:** \_\_\_\_\_\_\_\_\_\_\_\_

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**Task Outline**

**Timeline**

This project follows a timeline lasting approximately eight months, spanning from September through to about mid-April. As of Monday, October 14th, Milestones one and two are already done, leaving three milestones left for Term 1 and five more for Term 2. As of today, this is what the current general timeline for Term 1 looks like:

A screenshot of a cell phone

Description automatically generated

The timeline on which our work in Term 2 will follow is as such:

A screenshot of a cell phone

Description automatically generated

The next couple of milestones, Milestone 3: Process Modelling and Milestone 4: Data Modelling, are presently slated to take us into mid-November. After that, Milestone 5, which covers the detailed feasibility analysis and system proposal, will take us into early to mid-December. Term 2 covers Milestones 6 through 10 and will carry on the design phase and run through the entirety of the implementation and delivery phases.

In addition, there are two major presentations: the system proposal and system delivery. These presentations are scheduled for mid-December and mid-April respectively. The first presentation will mark the transition from the planning and analysis phases going properly into the design and implementation phases. The second major presentation will mark the finalization of the project with the finished system being delivered to the client. Along with the presentation, all accompanying processes will be carried through, including training the staff of Edenbridge.

Meetings throughout this project will be held at minimum on a weekly basis, with all members available being present. This can be increased at the need arises with much of the communication available to be done online via services such as Discord or Slack. Meetings will typically take place on Tuesdays and Thursdays. To date, there have been around 10 meetings with an approximate combined 15 hours.

Below is a detailed list of the milestones, with the full Gantt chart included later in this section:

* Milestone 1 – Project Selection: September 18th – 30th
* Milestone 2 – Project Scope: October 1st – 14th
* Milestone 3 – Process Modelling: October 15th – 28th
* Milestone 4 – Data Modelling: October 29th – November 18th
* Milestone 5 – Feasibility and Recommendation: November 19th – December 11th
* Milestone 6 – Final Database Design: January 1st – 31st
* Milestone 7 – UI and Physical Design: February 3rd – 14th
* Milestone 8 – Implementation – February 15th – March 20th
* Milestone 9 – Training: March 21st – 27th
* Milestone 10 – Delivery: March 30th – April 10th

Note: Dates provided for Milestones 6 through 10 are provisional until a more detailed timeline can be ascertained.

**Gantt Chart**

A close up of a map

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A screenshot of a computer

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A screenshot of a cell phone

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**Resource Allocations**

Each team member will have a specialization for the duration of this project. However, members will collaborate with other members to assist with aspects of this project as needed. The current list of specializations for members in this project is as follows:

* Aidan C: Database
* Harley L: Coding
* Justin A: Database
* Beryon C: Server infrastructure and user experience
* Evan G: Coding and user experience

The non-human resources that will be utilized include but are not limited to:

* Microsoft Office Suite
* Visual Studio
* GitHub
* Microsoft Project

The responsibility between members to assist in aspects will be adaptive depending on what tasks need to be completed and what is already accomplished. This can vary greatly from week to week or even day to day so resources will be shifted around as needed at the weekly meetings to accommodate for this fact.

Finally, documents such as this one will be the entire team’s responsibility as each member should have some aspect that they can contribute to it.

**Scope**

The scope of this project is to make a scheduling and time tracking application for Edenbridge Family Services. This system will utilize a database to store all the information and will be able to export files to Sage50 Accounting. This system will also have to comply with FOIP, PIPA, and PIPEDA. The system also needs to have a way for employees to sign off on their hours to mitigate, and if the situation arises, investigate fraud. This system will take input from coordinators and store entries in the database, but it will not create schedules with the input information. The system will then tell the coordinators if there are any discrepancies as defined in the system requirements.

**System Users**

Currently, the main users of the system in place are coordinators and bookkeepers. The other employees have very little access to information, which can lead to scheduling issues. Since there is no centralized schedule, there is often confusion between coordinators and employees about who is working when.

The primary users of the proposed system will include employees, coordinators, the parents of younger clients, and the bookkeepers. By creating a centralized database, anyone who needs information will be able to access it at any time.

The payroll workers will need access to the information about the employee's hours. The interface for the payroll employees should alert them about any important information and allow them to generate and then export a file to use as input for the accounting software after confirming the accuracy of all information.

Coordinators will require an interface that includes a calendar for each relevant department based on the coordinator’s selection. The selection will display all necessary information such as which employees are available as well as the times & days, as well as how many remining hours a specific individual can be scheduled for without incurring overtime hours. Should an employee be scheduled for a job that would result in overtime hours being applied, the coordinator would be shown how many hours of overtime would be accumulated.

**Policies and Procedures**

Of the policies in place at Edenbridge, there are a few that will significantly impact how the system is structured and implemented. At present, the workers hand in a signed paper form with their hours worked. The signatures are essential to not only confirm the hours, but to mitigate the potential for fraud by having it legally binding. As well, parents of children that go to Edenbridge must sign off before any services can be rendered out.

In terms of procedures that will impact this project, there is one significant case regarding the coordinators that will hold bearing on how aspects of this system operate. At present, coordinators must consult a binder containing a multitude of information on each potential worker before they can schedule them. This translates into the requirement of creating an interface to the database for coordinators as well as standard employees.

**Physical Layout**

The physical layout of the building is split up into two floors. The ground floor contains a reception area, a boardroom, and numerous offices for employees. The second floor contains more offices, a server room, counselling rooms, and therapy rooms. Each office has at least one computer running Windows 10. The presence of a server room already on site cuts down on many of the issues that could have been a factor with this system. With the physical components already compatible, what remains is the software, which is an order of magnitude simpler to ensure works with pre-existing equipment.

**Requirements**

**Problems and Opportunities**

The system at Edenbridge currently presents a range of issues from simple annoyances to severe errors that can result in a significant amount of money being lost. The most prevalent is the inefficiencies present in the system with translating physical forms into Excel spreadsheets. This process is extremely time consuming, taking hours or even entire days to input the data and verify that it is accurate to what is present on the form. The complexity of the data poses a more serious problem with it introducing the chance data may not be correctly organized right and creating errors further on.

Our system can increase the efficiency of their processes significantly. Another opportunity is the reduction of errors such as double booking by having all the necessary information available in a centralized database. There is a significant opportunity for saving money on paying multiple people for the same job. A lot of time can be saved having a more effective way to make scheduling decisions as well, allowing the employees currently coordinating the workforce to be assigned other tasks which could increase the overall productivity of the company. The ability to investigate fraud would also be improved by having detailed records stored in a database of the hours worked and the signatures being stored with each relevant form. Storing the information in this way would also make the process of auditing much easier.

**Business Requirements**

This system must allow their company to track hours worked more effectively, mitigate the potential for more than one worker to be scheduled for the same job, specify the department involved, track the classification of any given employee in the context of which department they do work in, and not allow financial data to be processed by the accounting software unless the worker responsible signs a legally binding form stating they have worked those hours.

**User Requirements**

Workers must be able to access their schedule as well as fill out forms about the job they have worked to record their work and all necessary data related to it. The person scheduling workers needs to have extensive information about the workers’ availability and how many hours they can be scheduled for based on the current state of their hours worked. The workers dealing with processing the accounting information need to be able to easily import this data to their accounting software. They should also be able to review any data to be processed for errors.

**Functional Requirements**

With regards to the functional requirements of the system, the system must be able to fulfill a variety of roles. First, it needs a database component to store all the data for the organization and allow it to be accessed. For scheduling purposes, the system will need the ability to gather employee information, including hours worked and availability, and store it in the database so it can be seen by coordinators. Along with that, the system needs the option for coordinators to schedule employees and allow employees to see their schedule. Finally, the system needs to be able to export data that can be input to Edenbridge’s accounting software.

**Non-Functional Requirements**

In accordance with FOIP and other privacy protection acts, the information stored in the system must not be able to be accessed by unauthorized people. The payroll part of the system must only allow authorized users to view its contents. Each user should only be granted the permission they absolutely require in order to accomplish their tasks, thereby creating a secure environment.

**System Requirements**

This system will need a database, web server, website, and scripts to process the data. A registered domain name will be required as well. While a secondary server would greatly reduce overall risk for downtime in the system, operations would not suffer too greatly with only a single server.

**Lessons Learned**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Date | Submitted By | Milestone | Experience | Lesson | Lesson Type | Effect |
| Oct. 11, 2019 | Beryon | Milestone 2 | Project has a substantial feature-set, most of which was previously unknown from the first couple times. | Learned a good amount about how to work Project, including different ways to set up tasks and organize them. | Technical | Going forwards, should be far easier to arrange events and plan things out via Project. As a side effect, there’s a measure of knowledge attained in how to potentially display events in the system being developed. |
| Oct. 11, 2019 | Justin | Milestone 2 | Milestone presentation was not great, no intro or conclusion | Make sure assignments include all components | Academic | We will have a team member observe presentations from the other class to know what needs to be included for future presentations |
| Oct 11,  2019 | Harley | Milestone 2 | Organization  of presentation  was not ideal. | The order in which the information is presented is very important if we want it to be easy to follow. | Academic. | Someone will be assigned the duty of analyzing the presentation to ensure the flow of information is sufficient. |
| Oct 11,  2019 | Aidan | Milestone 2 | My work school balance was not great for the first month of school | I learned how far I can push myself before my school begins to suffer from it | Academic. | Going forward I am not taking as much hours at work and am going to say no to more hours when asked so I can focus on this project |