The Project Proposal form

CI301 The Individual Project

LEVEL THREE COMPUTING PROJECT PROPOSAL 2015/2016

The deadline for submitting this form is Thursday, October 22, 2015. If you cannot meet this deadline for an acceptable reason you should ask your award leader for an extension. Your proposal will be marked on a Pass/Fail basis and failure to hand it in by the deadline will result in a Fail.

Name – **Adam Worley | Student Number 13842206**

Title of project – **ChronoLux – An alarm and management app with smart bulb connectivity**

Which course are you on? Please tick the one that applies:

* BA (Hons) Business Information Systems
* BSc (Hons) Business Computer Systems
* BSc (Hons) Computer Science
* BSc (Hons) Computer Science (Games)
* BSc (Hons) Digital Media Development
* BSc (Hons) Internet Computing (UCH)
* BSc (Hons) Digital Games development (UCH)
* BA (Hons) Digital Media
* BSc (Hons) Software Engineering
* BSc Computing

Are you:

* Full-time
* Part-time

Your Proposed Project

Please outline what you intend to do and indicate the main stages or elements in the project. Insert another sheet if necessary.

## The Problem

As daily lives get more hectic and waking up is last thing most people would like to do, I would like to develop an app that would try to make both more manageable.

Currently there are hundreds of alarm apps available on 'the Google Play store' and with Google now many people have access to their own personal digital assistant, but neither of these have been combined.

Alarm apps that can connect to 'smart-bulbs' is even less common with only a handful able to use their functionality.

## Introduction

My idea would be to create an alarm app that would allow users to have their day in the palm of their hands for when they wake up.

### Problem

* There is no alarm app that also utilises calendars, reminders or the weather.
* Few apps can interact with smart-bulbs

### Solution

* I will develop an android app that will be able to combine a user’s schedule and weather into a single app and allow for visual and audio output of information the user would like.
* The Alarm app will also be able to connect to smart-bulbs allowing for an artificial sunrise believed to help in a more graceful awakening.

## How?

### Platform

I will be developing primarily for the Android platform. This is due to multiple factors;

1. Android is currently the most widely adopted platform globally.
2. Development for Android is free.
3. I possess/have access to multiple different Android devices allowing for a broader range of testing on physical devices.

### Implementation

By using Android studio, the development suite based on Ideas Intellij development platform I will be able to write the application in Java utilising my previous education over the previous years of University.

The Android studio provides the Android libraries, virtual device emulation and easy live device usage making development simpler.

### Challenges

There will be many challenges to face while developing this app such as;

* Utilising the smart-bulb API(s).
* The fractured nature of Android could make development more difficult.
* Although Android is based on Java, it has many of its own libraries that I will need to learn.
* The app will involve requesting data from other services (calendar) that the user may not provide and I will need to handle gracefully.

### Deliverables

* To gradually increase the brightness of a smart-bulb to simulate the effect of sunrise. The app must also be able to control the light(s) in other ways such as turning them off at night/in the morning.
* Daily alarm with schedules, recurrence, customisable alarm tone.
* Able to display appointments and weather in an attractive and simple fashion.
* On disabling the alarm to read out schedule and offer suggestions. For example, if an umbrella/coat would be needed in the event of rain, or to leave within a set time to arrive at an appointment where the location has been entered.

### Timeline

|  |  |
| --- | --- |
| Date | Deliverable |
| October 2016 | Project Proposal |
| November 2016 | Interim Report |
| December 2016 | Viva |
| May 2017 | Final project completion/hand in |
| End of May 2017 | Exhibition |

To fit with this deadline, I will follow the following rough timeline, a more detailed one will be developed for the interim report.

|  |  |
| --- | --- |
| Weeks (Commencing from 03/10/2016) | Tasks |
| 1-3 | Research and writing project proposal |
| 3-6 | More focused research on the agreed project idea and writing interim report. |
| 6-8 | Proofing and finalising interim report ready for viva |
| 9-10 | Perform viva |
| 10-12 | Design application |
| Week 12 - Hand in date | Develop application |
| Throughout Design and development | Testing |
| Final 4 weeks prior to hand in | User testing and cleaning/improving UI |

The member of staff who has agreed to supervise this project you must have discussed this with the member of staff

Your supervisor's name (please print)- Marcus Winter

If there are any major hardware/software resources required from the University, have you checked that they will be available for your use?

* Yes
* No
* Not applicable

If the project is for an outside client or organisation, we need a letter saying they approve of your proposed project and will support it as far as is necessary:

* Letter attached
* Awaiting letter
* Not applicable

Date 19/10/2016

From time to time we may contact you by email to send you updated information and reminders about the project. Please check your University mailbox regularly and make sure that it does not go over the limit. You can forward your university email to your preferred email address by changing your personal settings on studentcentral. You should also keep an eye on the CI301 space on studentcentral for updates and announcements.

Jane Challenger Gillitt, Project Coordinator

**SCHOOL OF COMPUTING, ENGINEERING & MATHEMATICS ETHICS FORM**

This ethics form is designed to help you quickly and easily identify how you should approach any ethical issues raised by your project or dissertation. It should be completed for ALL research projects and dissertations prior to the commencement of the project. Please do not approach any participants involved in the research until this have been completed and discussed with your supervisor or member of the CEM ethics committee (if appropriate).

This form must be completed by the project student or researcher responsible for the project. Once completed, you should discuss it with your supervisor to ensure that you take the right follow-up actions.

**If you answer ‘No’ to all questions** **in this form and this is confirmed with your supervisor (if appropriate) then no further action is required.** Please note that in signing this form you accept that it is still your responsibility for your project or dissertation module to follow the **University’s Guidance on Good Practice in Research Ethics and Governance**, available on StudentCentral. Any significant change in the question, design or conduct of your project or dissertation that would alter your answers on this form must be notified to your supervisor who will advise you on whether you need further action.

**If you have answered ‘yes’ to *any* of the questions in Section B of the Student Checklist your supervisor will need to make a judgment as to whether or not the research includes more than a minimum level of risk. If this is the case then your supervisor will need to email this form to the CEM ethics committee (**[**CEMethics@brighton.ac.uk**](file:///C:\Users\jmc21.UNIVERSITY\Documents\NEW\Modules\CI301\Handbook%20current\CEMethics@brighton.ac.uk)**) for discussion prior to the commencement of research**.This does not mean that you will not be able to do the research, but it will need to be considered by the School Research Ethics and Governance Committee.

Ethics forms, example consent forms/participant information sheets and supporting guidance are available on the ***Research Ethics for Projects – CEM*** area of StudentCentral.

**Signed copies of this completed ethics form must be submitted with your project or dissertation. Note: the project or dissertation will not be marked if the completed checklist is not included.**

**PROJECT DETAILS**

1. Name of researcher: **Adam Worley**

2. Name of supervisor: **Marcus Winter**

3. Title of project: **ChronoLux – An alarm and management app with smart bulb connectivity**

4. Outline of the research (up to 100 words):

**I’d like to develop an alarm app that would allow a user to be able to manage their day from when they wake up and to integrate smartbulb functionality to allow the alarm to turn on the lights in a gradual manner to simulate a sunrise.**

**By integrating notifications, calendar appointments, weather and more this would also set my app apart as no app I have found has this level of daily integration.**

5. Location of research: **Brighton University**

8. Email address:  **A.Worley1@uni.brighton.ac.uk**

9. Contact address: **45 Selsey Road, Crawley, RH11 9HP**

10. Telephone number: **07849838319**

| **Please tick the appropriate box and answer the questions where appropriate.** | Yes | No |
| --- | --- | --- |
| 1. Does the study involve **participants who might be considered vulnerable** due to age or to a social, psychological or medical condition? (*e.g. children, people with learning disabilities or mental health problems, but participants who may be considered vulnerable are not confined to these groups).*   If yes then provide details of any such participants. See the University’s ‘Guidance on Good Practice in Research Ethics and Governance’ for more details.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..………..  Note: proposals involving vulnerable participants are often likely to require ethical approval from the Faculty of Science & Engineering Research Ethics and Governance Committee (FREGC). |  | x |
| 1. Will **photographic or video recordings** of research participants be collected as part of the research?   If yes then please outline consent and data protection procedures *(e.g. interviews cannot be overheard, details will not be accessible to others),* for the use of participants’ images. Example consent and information forms can be found on StudentCentral and see guidance on data collection at the end of this document.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..………..  If your data will not be confidential and anonymous then outline the justification for this decision here and procedures for mitigating against potential harm.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..……….. |  | x |
| 1. Does the study require the **co-operation of an individual to gain access** to the participants? (*e.g. a teacher at a school or a manager of sheltered housing)*   If yes then describe the procedures that will be put in place to ensure safe and ethical direct involvement of human participants. Where necessary and as appropriate, include comments on obtaining informed consent, reducing harm, providing feedback, and accessing participants through an individual providing information such as a teacher/lecturer, manager, employer etc. Example consent and information forms can be found on StudentCentral.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..……….. |  | x |
| 1. Will the participants be asked to discuss what might be perceived as **sensitive topics** (*e.g. sexual behaviour, drug use, religious belief, detailed financial matters) or* could participants experience psychological stress, anxiety or other negative consequences (beyond what would be expected to be encountered in normal life)?   If yes then describe the procedures that will be put in place to ensure safe and ethical direct involvement of human participants. Where necessary and as appropriate, include comments on obtaining informed consent, reducing harm, providing feedback. Example consent and information forms can be found on StudentCentral.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..……….. |  | x |
| 1. Will individual participants be involved in **repetitive/prolonged testing or vigorous physical activity, experience pain of any kind, or be exposed to dangerous situations, environments or materials** as part of the research?   If yes then describe the procedures that will be put in place to ensure safe and ethical direct involvement of human participants. Where necessary and as appropriate, include comments on obtaining informed consent, reducing harm, providing feedback. Example consent and information forms can be found on StudentCentral.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..……….. |  | x |
| 1. Will members of the public be **indirectly involved** in the research without their knowledge at the time? (*e.g. covert observation of people in non-public places, the use of methods that will affect privacy)*.   If yes then provide brief details here *(e.g. how they will be involved and, where known, the age, gender, ethnicity and location of those who will be indirectly involved).*  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..………..  `  Provide details of any negative impacts members of the public will be likely to face and that would not be considered minimal impacts (e.g. invasion of privacy, harm to property, being subject to what an individual perceives to be inappropriate behaviour). Describe the risks and if appropriate explain why you believe they are only minimal.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..………..  Describe any procedures that will be put in place to ensure safe and ethical indirect involvement of members of the public (*e.g. providing information and feedback if requested by the public*). Examples of participation information forms can be found on StudentCentral.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..………..  Describe how you will ensure data collection is confidential and anonymous (*e.g. people will not be able to be identified by photographs or notes taken by observers*), how data will be stored and who will have access to the data. If the data will not be confidential or anonymous, outline the justification for this decision here and procedures for mitigating against potential harm.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..……….. |  | x |
| 1. Does this research include **secondary data** that may carry personal or sensitive organisational information? *(Secondary data refers to any data you plan to use that you did not collect yourself, e.g. datasets held by organisations, patient records, confidential minutes of meetings, personal diary entrie).*   If yes then provide details regarding any secondary data to be used that may carry sensitive personal or organisational information.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..………..  If secondary data CEMs containing sensitive personal or organisational information are to be used, outline how such use will be ethically managed *(e.g. details such as anonymising data CEMs, ensuring protection of source agency, gaining consent of data owners, and how the data will be stored)*. See guidance on data collection at the end of this document.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..……….. |  | x |
| 1. Is this research likely to have significant **negative impacts on the environment**? (*For example, the release of dangerous substances or damaging intrusions into protected habitats.)*   If yes then provide details of these impacts here (for example the release of dangerous substances or damaging intrusions into protected habitats) and  ……………………..……………………..……………………..……………………..  ……………………..……………………..……………………..……………………..  Describe how you will mitigate against significant environmental harm and manage risks.  ……………………..……………………..……………………..……………………..  ……………………..……………………..……………………..…………………….. |  | x |
| 1. Will any participants receive **financial reimbursement** for their time? (*excluding reasonable expenses to cover travel and other costs*).   If yes then provide details and a short justification (e.g. amounts and form of reimbursement).  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..……….. |  | x |
| 1. Are there any **other ethical concerns** associated with the research that are not covered in the questions above?   If yes then give details here.  ……………………..……………………..……………………..……………………..………..……………………..………..  ……………………..……………………..……………………..……………………..………..……………………..……….. |  | x |

**All Undergraduate and Masters level projects or dissertations in the School of CEM must adhere to the following procedures on data storage and confidentiality.**

All data should be encrypted and stored securely. Documentation should be kept in a locked cabinet or desk, and electronic data should preferably be kept on a removable disk or data stick which can be locked away, or if this is not possible on a password protected computer. Confidential and sensitive data should not be emailed unless it is encrypted or password protected since emails are centrally archived.

For Undergraduate/Masters projects, normally only the student and supervisor will have access to the data (see the University’s ‘Guidance on Good Practice in Research Ethics and Governance for further details).Once a mark for the project or dissertation has been published, all data must be removed from personal computers, and original questionnaires and consent forms should be destroyed unless the research is likely to be published or data re-used. If this is the case a justification for this should be included where appropriate in this form and in the relevant consent and participant information forms.

