# School of Computing, Engineering and mathematics

# Computing Assignment Brief

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| MODULE CODE CI143 | MODULE TITLE Introduction to Requirements Analysis |
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| ASSIGNMENT TITLE | Group Assignment: requirements project |
| WEIGHTING | 50% of the overall module mark. |
| HAND OUT DATE | 10 October 2017 |
| HAND IN DATE | 4 Dec 2016 (Electronic Submission) |
| RETURN DATE | 2 Jan 2017 |
| ADDITIONAL FEEDBACK (IF ANY) | Tutorial after return of work if needed |

GENERAL DESCRIPTION OF THE COURSEWORK

Produce a set of documents to meet project expectations for the INMIU project.

MODULE OUTCOMES ASSESSED BY THIS PIECE OF WORK

1 Identify stakeholders and users and their differing requirements

2 Apply techniques for investigating requirements including modelling techniques.

NAMES OF MARKERS

John Kingston; Karl Cox

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| INDICATIVE MARKING CRITERIA AND CONTRIBUTING FACTORS  A We would expect all deliverables submitted, complete and accurate and most importantly a detailed description of what each deliverable means, i.e. a meaningful and accurate explanation. We would expect the deliverables to be placed within a single larger document that is structured, such as having an index and an executive summary of what to expect when reading it.  B All deliverables submitted, with some smaller errors such as misidentification of a minority of stakeholders, and a description of the documents but providing an overall document to place them in but with for example no index and no summary or different fonts used.  C All deliverables submitted, with some errors, but limited description e.g. ‘stakeholder onion model’ is not sufficient. No overall document provided.  D All deliverables submitted, with significant errors, such as missing key stakeholders or requirements, but no description.  E Majority deliverables submitted or all deliverables with 50%+ errors and no description.  F Less than half the deliverables submitted or all/majority deliverables submitted but the majority incorrect even with a description. |

Use the case study provided to **deliver** the following:

1. Stakeholder onion model
2. Goal model.
3. Business process model
4. Requirements table
5. Requirements specification table

Note: all deliverables must be accompanied by a textual explanation, providing a rationale for the model / table and some explanation of the contents of the model / table.

Marks weighting:

* Deliverables 100% of marks (equal weighting for each deliverable)

**Case Study [N.B. This case study is fictional]**

About a year ago, the US state of Colorado recently changed its laws to make it legal to possess marijuana for medicinal use and small amounts for personal use. It also became legal to grow and to sell marijuana within the state.

However, federal money laundering law still prohibits many institutions from making any profits from trade in drugs, including marijuana. The institutions that are governed by federal law include banks, which means that it is impossible for marijuana producers, wholesalers or retailers to open a bank account. Their businesses have been operating as cash-only businesses, and many of them now have significant reserves of cash and are having to hire more and more security personnel to protect it.

An entrepreneur has arrived in the state planning to rectify this. Nicole Keman has created a holding company, WB Holdings Inc., which has bought a majority share in three local businesses, all of which were struggling to stay afloat: a bank; a manufacturer of ATM machines; and a transport company that has a fleet of armoured trucks. In each case, the incentive she offers to the existing owners is that they retain 49% of the shares (and hence of the profits) and also that she indemnifies them against any potential legal action against their company at federal level.

She explains her plans to the managers of each business. Every business customer who joins the bank (which will be renamed ‘Weedbank’) will have the option to have an ATM installed at their premises. Because the ATMs are, according to local law, branches of the bank to which they are linked, they will accept deposits as well as paying out cash, and will update customers’ accounts immediately. The armoured trucks will make regular collections of cash from the ATMs and transport it to the bank.

She also tells the three business owners that she will be putting out a tender for a software supplier to create Internet banking facilities for commercial customers. The supplier will ensure that the bank’s financial records system is able to receive incoming messages from the remote ATMs, and will also offer standard Internet banking facilities of balance enquiries, viewing statements, etc. through a website.

You are CEO of a software firm who are planning to tender for the creation of the Internet banking facilities. One of your staff has carried out an interview with Ms Keman, the transcript of which is below.

Interviewer (I): How do you want the software to work?

NK: Like any other Internet banking site, as far as the user is concerned. It needs to be easy to use and secure.

I: What functions should it offer the user?

NK: Balance enquiry and statements. And the ability to set up direct debits and standing orders. That’s all for now … oh, except the ATMs must send a message to the bank every time they accept money, give out money, or are unloaded by the security vans.

I: Do the ATMs need to receive any messages from the bank?

NK: Yes… we’ll make them basic, so for now all they need is the customer’s balance. They will only offer balance enquiries, cash deposit and cash withdrawal. They must refuse to give out money in the unlikely event a customer goes into the red.

I: Into the red? You mean they should refuse money to any customer whose account goes below zero?

NK: Yes, that’s one of the conditions of the account. In these circumstances, it hardly matters.

I: Who should be able to use the internet banking facilities?

NK: Anyone who has the correct password.

I: You just want password protection?

NK: What other types are there?

I: Tokens – there are some good ones that generate a number every 30 seconds that you have to type in. The website has the same algorithm installed so it knows which number to expect. Or biometrics – fingerprints, eye scans, that type of thing.

NK: I like the sound of the number tokens. Can you make that happen?

I: I should think so. Where should the software run?

NK: On the bank’s existing web server… are you asking whether we should create a dedicated app?

I: Partly.

NK: Not at the moment, we’re in too much of a hurry.

I: So when do you need all this?

NK: As soon as possible. We’re signing clients up already.

I: One more question. Is this legal?

NK: (deep breath) What you are doing, yes. Allowing these businesses to open bank accounts is technically illegal. But I’m taking a risk that the US Attorney General will be forced to change the law regarding money laundering very soon, because otherwise organised crime might move in and effectively operate illegal banking operations for the cash-rich hashish businesses in this state – for a significant and undeclared fee.

I: I see. Will you indemnify us against federal prosecution, then?

NK: Yes, I’ll put that in writing.

**Suggested schedule:**

1/ Who are the stakeholders? Draw an onion model.

2/ Produce a goal model for WB Holdings Inc.

3/ Produce at least two business process models that illustrate the process of a customer (a) paying money in to the ATM (b) accessing their balance via Internet banking.

4/ Write a table of requirements

5/ Add MoSCoW priorities and other details to this table to turn it into a requirements specification.