

SET09102 Coursework

Report



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Jonathan Mitchell

40311730

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# Analysis

Euston Leisure, an association of sport centres in the city of Euston, are looking for a software system, Euston Leisure Messaging (ELM), to be developed.

This system will provide the following service: validate, sanitize and categorise incoming messages to Euston Leisure in the form of:

* SMS text messages
* Emails
* Tweets

## Requirements Specification

### Functional Requirements

The computer system will provide the following:

* Message select page
* SMS input page
* Email input page
* Tweet input page
* Message display Page
* Ability to write to texts file

Message Input Page will:

* Provide the user with buttons to navigate to one of the following pages:
  + SMS input page
  + Email input page
  + Tweet input page

SMS Input Page

* All input is to be verified
* Display a message if any input is incorrect/missed out
* Process all messages appropriate to its type
* A navigate button to go to message display Page
* An insert button to store message

Email Input Page

Tweet Input page

Message Display Page will:

### Non-functional Requirements

* All messages must be strings composed of ASCII characters
* Each page will provide clear details of which box(es) information is to be inserted into
* Each message will have a Message Header comprising:
  + Message ID containing:
    - Message type “S”,”E”,”T” followed by 9 numeric characters
  + Body Will Comprise:
    - SMS Messages Will contain:
      * A SENDER
        + In the form of an international telephone number
      * The MESSAGE TEXT
        + Must be no more than 140 characters
        + It may contain embedded text speak abbreviations
    - Email Messages Will contain:
      * A SENDER
        + In the form of a standard email address
      * A SUBJECT
        + Must be no more than 20 characters
      * The MESSAGE TEXT
        + Must be no more than 1028 characters long
        + It may contain embedded hyperlinks. N the form of standard URLs
    - Tweets will contain:
      * A SENDER
        + Must consist of a Twitter ID: “@”
        + Followed by a maximum of 15 characters
      * MESSAGE TEXT
        + Must not been more than 140 characters
        + Can contain the following:

Textspeak

Same as SMS above

Hashtags

Must be a string of characters preceded by a “#” sign

Twitter ID’s

As above

## User Stories

As the System

I want to be able to deal with SMS Messages

As the System

I want to be able to deal with Email Messages

As the System

I want to be able to deal with Twitter Messages

As the System

I want to be able to process SMS messages by checking if they contain textspeak abbreviations and expand them to their full form

As the System

I want to be able to process Emails to determine if they are standard Emails or Significant Incident Reports.

As the System

I want to be able to Process Emails to see if they contain Hyperlinks and quarantine them

As the System

I want to be able to process tweets by checking if they contain textspeak abbreviations and expand them to their full form

As the System

I want to be able to process hashtags in tweets and add them to a list to display how many times they are used

As the System

I want to detect the three types of messages (SMS, Email & Tweet) and write them to a file(s) in JSON format

As the System

I want to be able to display the trending list, list of “@” mentions & the SIR list

As the System

I want to be able to process the above message types from an input file

## Use-Case Model

# Design

## Class Diagram

# Implementation

# Testing

## Testing Strategy

## Test Plan

## Test Cases

# Evaluation