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CCT College Dublin Continuous Assessment

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| Programme Title: | BSc in Computing in IT | | |
| Cohort: | BSc Y3 | | |
| Module Title(s): | Concurrent Systems | | |
| Assignment Type: | Individual | Weighting(s): | 100% |
| Assignment Title: | Repeat CA | | |
| Lecturer(s): | Sam Weiss | | |
| Issue Date: | 2nd July 2024 | | |
| Submission Deadline Date: | Sunday 28th July 2024 @ 23:59 | | |
| Late Submission Penalty: | Late submissions will be accepted up to 5 calendar days after the deadline. All late submissions are subject to a penalty of 10% of the mark awarded.  Submissions received more than 5 calendar days after the deadline above will not be accepted and a mark of 0% will be awarded. | | |
| Method of Submission: | Moodle | | |
| Instructions for Submission: | Upload NetBeans project to Moodle | | |
| Feedback Method: | Results posted in Moodle gradebook | | |
| Feedback Date: | After exam board | | |

Learning Outcomes:

Please note this is not the assessment task. The task to be completed is detailed on the next page.

This CA will assess student attainment of the following minimum intended learning outcomes:

n/a

Attainment of the learning outcomes is the minimum requirement to achieve a Pass mark (40%). Higher marks are awarded where there is evidence of achievement beyond this, in accordance with QQI Assessment and Standards, Revised 2013, and summarised in the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| Percentage Range | CCT Performance Description | QQI Description of Attainment | |
| Level 6, 7 & 8 awards | Level 9 awards |
| 90% + | Exceptional | Achievement includes that required for a Pass and in most respects is significantly and consistently beyond this | Achievement includes that required for a Pass and in most respects is significantly and consistently beyond this |
| 80 – 89% | Outstanding |
| 70 – 79% | Excellent |
| 60 – 69% | Very Good | Achievement includes that required for a Pass and in many respects is significantly beyond this | Achievement includes that required for a Pass and in many respects is significantly beyond this |
| 50 – 59% | Good | Achievement includes that required for a Pass and in some respects is significantly beyond this | Attains all the minimum intended programme learning outcomes |
| 40 – 49% | Acceptable | Attains all the minimum intended programme learning outcomes |
| 35 – 39% | Fail | Nearly (but not quite) attains the relevant minimum intended learning outcomes | Nearly (but not quite) attains the relevant minimum intended learning outcomes |
| 0 – 34% | Fail | Does not attain some or all of the minimum intended learning outcomes | Does not attain some or all of the minimum intended learning outcomes |

Please review the CCT Grade Descriptor available on the module Moodle page for a detailed description of the standard of work required for each grade band.

The grading system in CCT is the QQI percentage grading system and is in common use in higher education institutions in Ireland. The pass mark and thresholds for different grade bands may be different from what you have experience of in the higher education system in other countries. CCT grades must be considered in the context of the grading system in Irish higher education and not assumed to represent the same standard the percentage grade reflects when awarded in an international context.

Assessment Task

Students are advised to review and adhere to the submission requirements documented after the assessment task.

You have been tasked with developing the following program to record and sum a series of randomly generated integers:

* The program will have a client-server architecture
* The program will start with an empty list/array of integers called numList
  + Where this list is stored is up to you
* The program will also start with an integer called total, initialised to 0
  + Again, where this is stored is up to you
* The clients will connect to the server via Java RMI or WebSockets
* Each client will keep track of the number of integers it has generated
* While less than 5 clients are connected to the server, nothing happens
* Once at least 5 clients are connected to the server, each client will execute the following:
  + Every 10ms the client will generate a random integer between 0 and 12 inclusive
  + The client will append the integer to the end of numList
  + The client will add the integer to total
  + Once the total is greater than or equal to 1 million, the client will stop and print out the total, followed by numList

Marks may be lost for bad code quality eg unreadable code or no/few comments.

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| --- | --- |
| **Task** | **Grade** |
| Client-server communication | 10 |
| Client functionality | 10 |
| numList manipulation | 30 |
| count manipulation | 30 |
| Good design/features | 20 |

Submission Requirements

All assessment submissions must meet the minimum requirements listed below. Failure to do so may have implications for the mark awarded.

All assessment submissions must:

* Be submitted by the deadline date specified or be subject to late submission penalties
* Be submitted via Moodle upload as a NetBeans project.
* Use [Harvard Referencing](http://40.115.124.2/sp/subjects/guide.php?subject=harvardref) when citing third party material
* Be the student’s own work.
* Include the CCT assessment cover page.

Additional Information

* Lecturers are not required to review draft assessment submissions. This may be offered at the lecturer’s discretion.
* In accordance with CCT policy, feedback to learners may be provided in written, audio or video format and can be provided as individual learner feedback, small group feedback or whole class feedback.
* Results and feedback will only be issued when assessments have been marked and moderated / reviewed by a second examiner.
* Additional feedback may be requested by email. Additional feedback may be provided as individual, small group or whole class feedback. Lecturers are not obliged to respond to email requests for additional feedback where this is not the specified process or to respond to further requests for feedback following the additional feedback.
* Following receipt of feedback, where a student believes there has been an error in the marks or feedback received, they should avail of the recheck and review process and should not attempt to get a revised mark / feedback by directly approaching the lecturer. Lecturers are not authorised to amend published marks outside of the recheck and review process or the Board of Examiners process.
* Students are advised that disagreement with an academic judgement is not grounds for review.
* For additional support with academic writing and referencing students are advised to contact the CCT Library Service or access the [CCT Learning Space](http://learningspace.cct.ie/subjects/index.php).
* For additional support with subject matter content students are advised to contact the [CCT Student Mentoring Academy](https://moodle.cct.ie/mod/forum/view.php?id=55148)
* For additional support with IT subject content, students are advised to access the [CCT Support Hub](https://moodle.cct.ie/course/view.php?id=1861).