

# Developing and supporting the curriculum

## Mapping Building Design Practices to Computer Program Design

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| 1 | <b>Your higher education institution:</b><br>Heriot-Watt University                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 2 | <b>Name author(s), and contact details:</b><br>Dr. Kamaran Fathulla - MACS Dubai Campus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 3 | <b>How does your project contribute to a research-informed and professionally relevant curriculum?</b><br><br>It feeds from research carried out by Microsoft and others into the subject of code navigation. Various academic research papers have been published to show the relevance of a very limited spatial property to code navigation. Our project looks at a much wider range of real world spatial navigation skills. This was done in the context of navigating a building which offered a much richer ontological vocabulary for the concept of navigation in software.                                                                            |
| 4 | <b>How does your project support an international and multi-disciplinary curriculum?</b><br><br>The project forms a close link with Built Environment faculty. Furthermore, working with students from various nationalities here in Dubai gives the findings of the report a multicultural dimension which will enrich future curriculum development efforts.                                                                                                                                                                                                                                                                                                  |
| 5 | <b>How does your project support student-centred approaches that promote student engagement and leadership?</b><br><br>Students from Dubai Campus were invited to gather real world spatially oriented navigational properties and attributes. Their findings will feed directly into further stages of the project. Students' real world experiences can now be used to influence how certain aspects of computer science courses could be improved.                                                                                                                                                                                                           |
| 6 | <b>How does your project help to reshape the learning environment? Please refer (where relevant to):</b> <ul style="list-style-type: none"> <li>• <b>Technological mediation</b><br/><br/>It is possible to embed the findings of the repro in programming-related courses to help students not only navigate large segments of code but also be able to make sense of such code conceptually. This will help design, maintenance and re engineering of programming projects.</li> <li>• <b>The distribution of learning across global locations</b><br/>This project was a collaboration between colleagues at HWU campuses in Dubai and Edinburgh.</li> </ul> |