# Mark scheme

1. **Analysis**
   1. Problem identification
      1. Description of the problem
      2. Describing and justifying the features that make the problem solvable by computational methods
      3. Explaining why the problem is amenable to a computational approach
   2. Stakeholders
      1. Identifying parties that may have an interest in the solution
      2. Explaining how the solution is suited to the stakeholder’s needs
   3. Researching the problem
      1. Finding instances of the problem
      2. Researching pre-existing solutions
      3. Identifying and explaining essential features of a solution
      4. Identifying and explaining the limitations of the proposed solution
   4. Specification of a solution
      1. Specify and justify the solution requirements including hardware and software configurations where appropriate
      2. Specify and justify measurable success criteria for the proposed solution.
2. **Design**
   1. Breaking down the problem into its constituent components
   2. Describing a solution
      1. Describing the structure of a solution
      2. Describing and justifying the individual algorithms used in the complete solution
      3. Describing usability features used in the solution
      4. Identifying key variables / data structure / classes and justifying / validating my choices
      5. Identifying and justifying useable test data during development and post development
3. **Development**
   1. Iterative development
      1. Commented code listings for each stage
      2. Evidence of prototype solutions for each stage
   2. Testing to inform development
      1. Evidence of testing at each stage, justifying the reason for the test
      2. Evidence of remedial actions in later iterations
4. **Evaluation**
   1. Testing to inform evaluation
      1. Evidence of testing robustness of final solution
      2. Evidence of usability testing {User feedback}
   2. Success of solution
      1. Comparison of process and solution with the original success criteria
   3. Describing the final product
      1. Commenting on the effectiveness of the design and usability
   4. Maintenance and further development
      1. Discussion of maintainability of solution
      2. Discussion of potential further development