



Level 4 Software Developer Apprenticeship

9648-71

Sample End-Point Assessment Synoptic Project

Sample Version 1

Sample Synoptic Project Pack

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Delivery Section

The Responsible Person Guidance

This synoptic assessment is designed to require the apprentice to make use of their knowledge, understanding and skills they have built up over the course of their learning for this qualification to tackle problems/tasks/challenges.

This approach to assessment emphasises to apprentices the importance and applicability of the full range of their learning to practice in their industry area, and supports them in learning to take responsibility for transferring their knowledge, understanding and skills to the practical situation, fostering independence, autonomy and confidence.

Apprentices are provided with a set of tasks. They then have to draw on the knowledge and skills; they have to independently select the correct processes, skills, materials, and approaches to take, from across the qualification, to make good decisions that will achieve an end result that is fit for the specified purpose.

During the learning programme, it is expected that tutors will have taken the opportunity to set shorter, formative tasks that allow apprentices to be supported to independently use the learning they have so far covered, drawing this together in a similar way, so they are familiar with the format, conditions and expectations of the synoptic assessment.

You should explain to apprentices what the standards are and how they are implemented in assessing the synoptic project, so they will understand the level of performance that will access a higher level of achievement in line with the grading criteria.

The synoptic project brief indicates the content assessed for this synoptic assessment.

The apprentice should not be entered for the assessment until the end of the course of learning for the apprenticeship so they are in a position to complete the assignment successfully.

Guidance on tasks

Time

The time allocated for the completion of the tasks and production of evidence for this assessment is **five days**. Apprentices are required to plan their in relation to the time allocated for each task.

Resources

Apprentices must have access to a suitable range of resources to carry out the tasks and have the opportunity to choose materials demonstrating the ability to select from a range of appropriate materials.

Centres must provide the following equipment for each apprentice:

- A system that is configured to allow application development
- A system that has the following installed
 - An office productivity package
 - A text editor such as notepad or text wrangler
- Access to a network that provides internet access for research

The responsible person is to observe the apprentice undertaking the task and use the Practical Observation Form (PO) to record the observation.

Health and safety

Apprentices should not be entered for assessment without being clear of the importance of working safely, and practice of doing so. The tutor must immediately stop an assessment if an apprentice works unsafely. At the discretion of the tutor, depending on the severity of the incident, the apprentice may be given a warning. If they continue to work unsafely however, their assessment must be ended and they must retake the assessment at a later date.

Observation

Where the responsible person is required to carry out observation of performance, detailed notes must be taken of the quality of performance along with any other aspects of performance that will support a judgement (eg order and factual speed (in minutes/hours) with which something is done). Responsible persons should direct the apprentices to ensure that any supporting evidence included eg screenshots or photos can be easily matched to the correct apprentice, are clear, sufficiently well-lit and showing the areas of particular interest for assessment (ie taken at appropriate points in production etc).

If apprentices are required to work as a team, each apprentice's contribution must be noted separately. The responsible person may intervene if any individual apprentice's contribution is unclear or to ensure fair access (see below).

Preparation

Apprentices should be aware of which aspects of their performance will be seen favourably in assessment according to the grading information. This is best carried out through routinely pointing out good or poor performance during the learning period, and through formative assessment. Apprentices should be encouraged to do the best they can and be made aware of the difference between these summative assessments and any formative assessments they have been subject to.

Minimum evidence requirements

The section:

- *What you must produce for marking,*

in the assignment lists the minimum requirements of evidence to be submitted for assessment. Evidence above and beyond this may be submitted, but should provide useful information for assessment.

Where the minimum requirements have **not** been met, the assessment will be based on the evidence that has been submitted. **Where this is insufficient evidence to provide an assessment, no other evidence outside of the end-point assessment requirements will be used.**

Guidance on assessment conditions

The assessment conditions that are in place for this synoptic project are to:

- ensure the rigour of the assessment process
- provide fairness for apprentices
- give confidence in the outcome.

They can be thought of as the rules that ensure that all apprentices who take an assessment are being treated fairly, equally and in a manner that ensures their result reflects their true ability. The conditions outlined below relate to this synoptic project. These do not affect any formative assessment work that takes place. Formative assessment will necessarily take a significant role throughout the learning programme where support, guidance and feedback (with the opportunity to show how feedback has been used to improve outcomes and learning) are critical. This approach is not, however, valid for summative assessment. The purpose of summative assessment is to confirm the standard the apprentice has achieved as a result of participating in the learning process. Please refer to the End-point Assessment Pack for further information.

Authentication of apprentice work

Apprentices are required to sign declarations of authenticity, as is the responsible person. The relevant form is included in this pack.

The completion of the final evidence for the tasks that make up this synoptic project must be completed in the specified conditions. This is to ensure authenticity and prevent malpractice as well as to assess and record apprentice performance for assessment in the practical tasks. *Any aspect that may be undertaken in unsupervised conditions is specified and clearly marked.*

Apprentices can rework any evidence that has been produced for this synoptic project during the time allowed. However, this must be as a result of their own review and identification of the requirement to do so and not as a result of feedback from either the responsible person, tutor or line manager. Once the evidence has been submitted for assessment, no further amendments to evidence can be made.

Apprentice evidence must be kept secure to prevent unsupervised access by the apprentice or others. Where evidence is produced over a number of sessions, the responsible person must ensure apprentices and others cannot access the evidence without supervision. This might include storing written work or artefacts in locked cupboards and collecting memory sticks of evidence produced electronically at the end of each session.

Where the apprentice or responsible person is unable to, or does not confirm authenticity through signing the declaration form, the work will not be accepted at assessment. If any question of authenticity arises eg at assessment, the centre may be contacted for justification of authentication

Accessibility and fairness

Where the apprentice has special requirements, the centre/employer/responsible person should refer to the separate guidance document *Access arrangements and reasonable adjustments* section of the City& Guilds website

The responsible person **cannot** provide clarification to any apprentice on the requirements of any aspect of this synoptic project. Guidance must only support access to the synoptic project and must not provide feedback for improvement. Any clarification and guidance should be recorded fully and will be taken into account along with the apprentice's final evidence during assessment and must be made available for assessment. No one from the centre or employer should provide feedback on the quality of the performance or how the quality of evidence can be improved. This would be classed as malpractice.

It is up to the Independent end-point Assessor during assessment to decide in what area, if any, the guidance provided by the responsible person suggests the apprentice is lacking, the severity of the issue, and how to proceed on the basis of this full range of evidence. The Independent end-point Assessor must record where and how guidance has had an impact on the assessment, so this is available should queries arise at moderation or appeal.

The responsible person should do their best to refrain from providing guidance if the apprentice is thought to be able to correct the issue without it. No prompts are permitted.

The responsible person may not provide guidance that the apprentice's work is not at the required standard or how to improve their work.

All apprentices must be provided with an environment and resources that allows them access to the full potential of completing the tasks to the best of their ability.

Guidance on Assessment

Please see the End-point Assessment Pack for information on assessment and grading for this apprenticeship.

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Declaration of authenticity

Apprentice name

Candidate number

Centre name

Centre number

Apprentice declaration:

I confirm that all work submitted is my own, and that I have acknowledged all sources I have used.

Candidate signature

Date

DD/MM/YY

The Responsible Person declaration:

I confirm that all work was conducted under conditions designed to assure the authenticity of the apprentice's work, and am satisfied that, to the best of my knowledge, the work produced is solely that of the apprentice.

Responsible Person Name & signature

Date

DD/MM/YY

Note:

Where the apprentice and/or responsible person is unable to, or does not confirm authenticity through signing this declaration form, the work will not be accepted at assessment. If any question of authenticity arises, the responsible person may be contacted for justification of authentication.

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Practical Observation Form (PO)

Candidate Name:

Assessment ID:

Candidate Number:

Centre Number:

Notes

Task 1

Task 2

Task 3

Task 4

Responsible Person signature:

Date :

Responsible Person name:

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The Synoptic Project

This section is to be given to the apprentice at the start of the timed assessment.

Time allowed is **five days**.

Apprenticeship section

Apprentice Guidance

General guidance

This is a formal summative assessment. You will be assessed on the quality and accuracy of your practical performance and any written work you produce. It is therefore important that you carry your work out to the highest standard you can. You should show how well you know and understand the subject and how you are able to use your knowledge and skills together to complete the tasks.

Plagiarism

Plagiarism is the failure to acknowledge sources properly and/or the submission of another person's work as if it were the apprentice's own. Plagiarism is not allowed in this assignment.

This is an assessment of your abilities, so the work must be all your own work and carried out under the conditions stated. You will be asked to sign a declaration that you have not had any outside help with the assessment.

The responsible person is allowed to give you some guidance if necessary, but they will record any other guidance you need and this will be taken into account during assessment.

Where research is allowed, we must be able to identify which work you have done yourself, and what you have found from other sources. It is therefore important to make sure you acknowledge all sources and clearly reference any information taken from them.

Timings and planning

You should take care when planning to make sure you have divided the time available between tasks appropriately.

If you have a good reason for needing more time, you will need to explain the reasons to the responsible person who will contact the City & Guilds End-point assessment team.

Health and Safety

You must always work safely, in particular while you are carrying out practical tasks.

You must always follow any relevant Health and Safety regulations and codes of practice.

If the responsible person sees you working in a way that is unsafe for yourself or others, they will ask you to stop immediately, and tell you why. You will not be able to be reassessed until your centre/ the responsible person are sure you are ready for assessment and can work safely.

Presentation of work

Presentation of work must be neat and appropriate to the task.

You should make sure that each piece of work is clearly labelled with your name, details of the task and the reference along with your centre number and name.

All electronic files must be given a clear file name that allows the Independent end-point assessor to identify it as your work.

Written work eg reports may be word processed but this is not a requirement.

All sketches and drawings should be neat and tidy and annotated.

Calculations should be set out clearly, with all working shown, together with any assumptions made.

You should use appropriate units at all times and answers must be expressed to a degree of accuracy, consistent with the requirements of the task.

The use of non-programmable scientific calculators is acceptable

Synoptic Project Scenario

You are currently working as software development consultant for a small company that supports SMEs and charitable organisations.

The Managing director of a small health charity has asked you to develop an application for use on their website that calculates Body Mass Index (BMI). To aid you in developing this they produced an abbreviated Software Requirements Specification Document (SRS)

Software Requirements Specification Document (SRS)

1. Purpose

The goal of this project is to produce an application to enable members to calculate their BMI and compare the current BMI with previously recorded results.

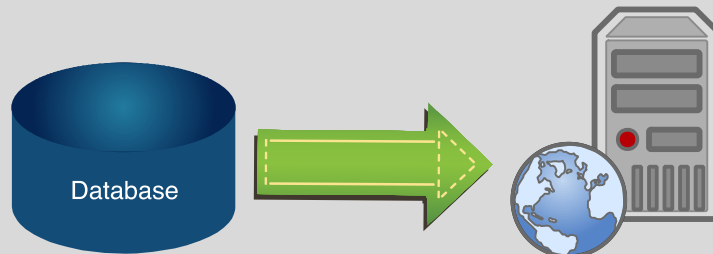
2. Scope

The "BMI Calculator" is a web based application which helps members find their current BMI based on their age, height and weight and then compare it to previous results.

3. Product Perspective

3.1 System Interface

The application requires an internet connection to allow the information to be entered by members. All information is stored on a database which is located on a Web Server.



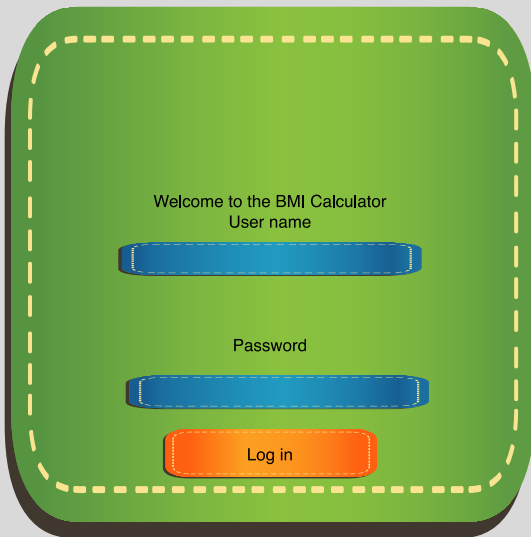
3.2 User Interfaces

A first-time user should see the log-in page when they open the application (see figure 1). If the user has not registered they should be able to do this from the login page. When registering the user will have to enter their date of birth, if user is under 18 then they should be informed that they are not eligible to use the application and the process should be terminated.

If the user is not a first-time user they should be able to access the BMI calculator when the application is opened (see figure 2). Once the results have been entered and the BMI calculated the results should be displayed (see figure 3). The results should be colour coded green for a healthy weight, Amber for overweight and red for obese.

The user should then be able to compare the results with any previously saved results (see figure 5).

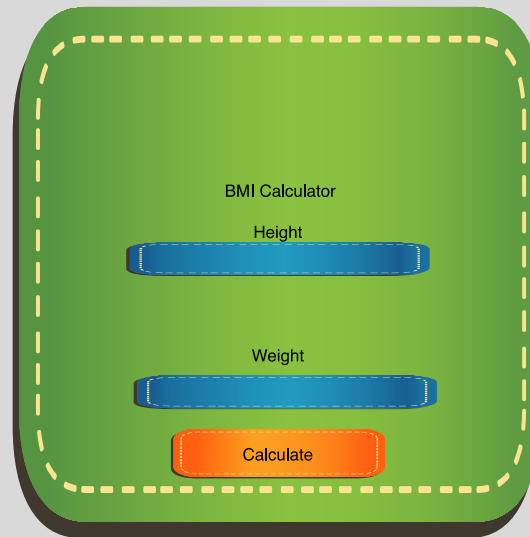
Every user should have a profile page where they can edit their e-mail address, phone number and password (see figure 4).



Welcome to the BMI Calculator
User name

Password

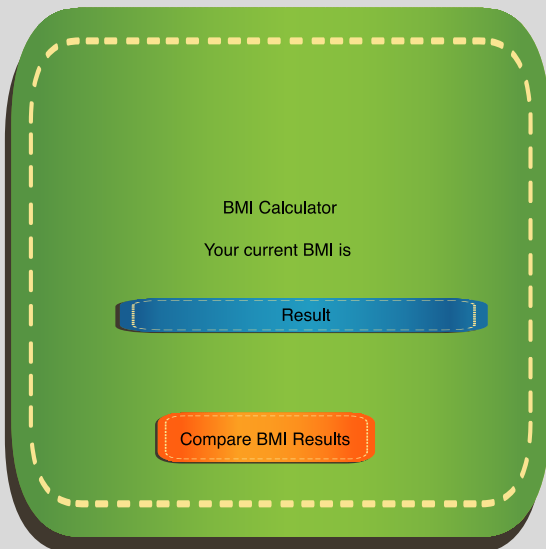
Figure 1



BMI Calculator
Height

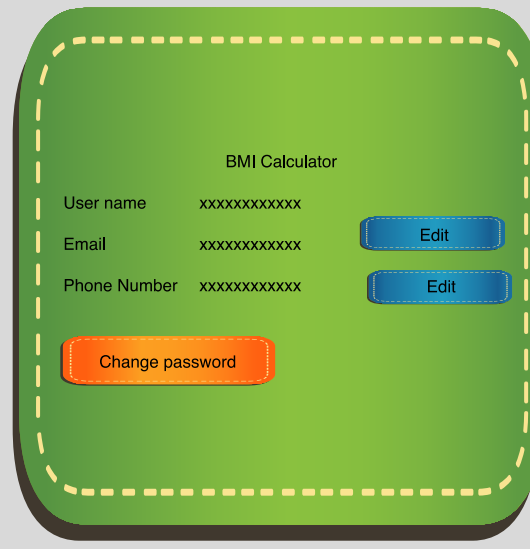
Weight

Figure 2



BMI Calculator
Your current BMI is

Figure 3



BMI Calculator
User name xxxxxxxxxxxx
Email xxxxxxxxxxxx
Phone Number xxxxxxxxxxxx

Figure 4

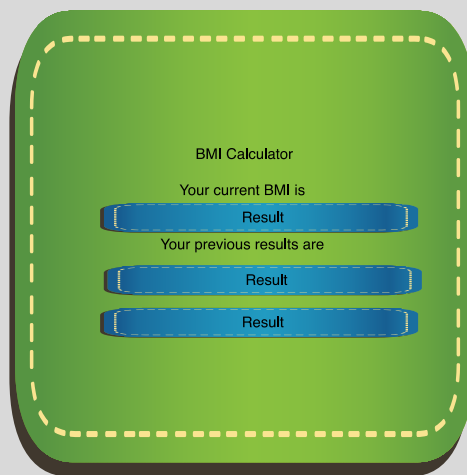


Figure 5

4. Product functions

The primary goal of the application is to calculate member's current BMI and allow them to compare this with previous recorded results stored in a database.

There will also be a requirement for members to be able to edit their profile information which is stored on the database.

5. User characteristics

The envisaged users will be adults that are currently overweight or obese wishing to monitor their BMI.

6. Limitations

The storage and accessing of information must comply with data protection legislation and be reliable.

Conditions for Assessment

You must carry the tasks out on your own, under supervised conditions.

You may carry out research and collect the information you want to use in your planning documentation under supervised conditions.

Tasks

Task 1

Prepare a planning document to enable the creation of the prototype website.

Conditions of assessment:

You will be supervised by a responsible person, at the end of each session any non-electronic artefacts should be handed to this person.

Your planning document must be completed working alone under supervised conditions.

You will have access to a system with Internet access to allow research, a bibliography of the sites used should be provided.

What must be presented for marking:

- Planning document(s)
- Bibliography of reference sources used

Guidance to the Independent End-point Assessor regarding assessment (not to be shown to the apprentice):

It is expected that the apprentice will include the following:

- Planning documentation
- A Bibliography of reference sources used
- A test plan

It is anticipated that apprentices achieving an exceeding will have provided the following information:

- Justification for the choice of programming language and life cycle model
- Detailed test plan, including user test plan

Task 2

Create the prototype application.

Conditions of assessment:

You will be observed undertaking this task by the responsible person.

What must be presented for marking:

- Completed application
- Reflective account showing how the application was developed

Evidence above and beyond this may be submitted, but should provide useful information for assessment.

Guidance to the Independent End-point Assessor regarding assessment (not to be shown to the apprentice):

It is expected that the apprentice will include the following:

- A functioning application that calculates the BMI
- Evidence to show how the application was developed including annotated screen prints where appropriate
- Evidence of development of code
- Evidence of approach to coding

It is anticipated that apprentices achieving an exceeding will have provided the following information:

An application that fully meets all of the client's requirements stated in the SRS. Such as functionality, usability, security etc.

Task 3

Test the application for functionality.

Conditions of assessment:

You will be observed undertaking this task by the responsible person.

Your testing of the application must be completed working alone under supervised conditions.

What must be presented for marking:

Planning document(s) where amendments have been made.

- Test result
- Completed application
- Recommendations for improvements

Evidence above and beyond this may be submitted, but should provide useful information for assessment.

Guidance to the Independent End-point Assessor regarding assessment (not to be shown to the apprentice):

It is expected that the apprentice will include the following:

Test results recorded

It is anticipated that apprentices achieving an exceeding will have provided the following information:

- User Acceptance Test plan
- Evidence of recording results
- Application evaluated and appropriate recommendations made.
- Evaluation of applications performance
- Recommendations for further development