From “pre-planning_1_planning_the_timetable”, we know how many sessions we have and what activities and times we allocated. Now it’s a case of filling in a bit more detail on a session by session basis. As we get more experience with sample assessments, we can fine tune this plan.

## Session 1

| **Activity 1** | Task planning and system design changes | **10 minutes** |
|---|---|---|

Create a Task Plan and start a Log Book.
(1) Date and Time updated
(2) General Comments – timetable of activities and suggested timings from the assessment.
(3) Issues – should be none at this stage
(4) Action list for Session 1
What needs to be done and list in priority order – most urgent first
What resources you need
How to determine if you successfully achieved your goals for this sessions

| **Activity 2** | Analysis of brief | **80 minutes** |
|---|---|---|

On first reading of the brief – ask: What inputs are required? What functions are the inputs required to perform?
What outputs are required? What functions are the outputs required to perform?
What aspect of the client brief relate to user experience?
What constraints are imposed?

From the above list, come up with your own set of “operational requirements” with “must have”, “good to have” and “nice to have” features.

| Operational requirement | Must have | Good to have | Nice to have |
|---|---|---|---|
| | | | |
| | | | |

From the “operational requirements”, produce a “Test Plan”

| Description of test | How this could be achieved |
|---|---|
| | |

## Session 2

| **Activity 1** | Task planning and system design changes | **10 minutes** |
|---|---|---|

Update Task Plan and Log Book.
(1) Date and Time updated
(2) General Comments – overview of planned work v achieved work during Session 1.
(3) Issues (problems) encountered and solutions with justification during Session 1.
(4) Action list for Session 2
What needs to be done and list in priority order – most urgent first
What resources you need
How to determine if you successfully achieved your goals for this sessions

| **Activity 3** | System design | **80 minutes** (145 mins allocated, so 65 minutes remaining) |
|---|---|---|

From your "operational requirements":
(1) Make a list of possible input and output hardware options and microcontrollers that could achieve your solution.
(2) Make a table noting the advantages and disadvantages of each element.
(3) Make your selection, giving reasons for your choice

Create an outline plan for your system that meets the client brief

| Action | Hardware required | Software implementation | Risks |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

Start your hardware design - circuit (schematic) diagrams, interconnection lists, pin functions etc.
Start your software design – Decision tables, Flowcharts etc.

The hardware and software designs may change/evolve during the task, so treat this as a starting point.

Suggest your first software design should test most of the hardware functionality, with hooks/stubs to add functionality as the task progresses.

## Session 3

| **Activity 1** | Task planning and system design changes | **10 minutes** |
|---|---|---|
| Update Task Plan and Log Book.<br>(1) Date and Time updated<br>(2) General Comments – overview of planned work v achieved work during Session 2.<br>(3) Issues (problems) encountered and solutions with justification during Session 2.<br>(4) Action list for Session 3<br>What needs to be done and list in priority order – most urgent first<br>What resources you need<br>How to determine if you successfully achieved your goals for this sessions | | |

| **Activity 3** | System design | **65 minutes** |
|---|---|---|
| Continue with your software design (Flowcharts etc) and any changes to your hardware design following your Activity 1, this session. | | |

| **Activity 4** | System assembly and programming | **15 minutes** (145 mins allocated, so 130 minutes remaining) |
|---|---|---|
| Assemble the Hardware and write the hardware test software. | | |

## Session 4

| **Activity 1** | Task planning and system design changes | **10 minutes** |
|---|---|---|

Update Task Plan and Log Book.
(1) Date and Time updated
(2) General Comments – overview of planned work v achieved work during Session 3.
(3) Issues (problems) encountered and solutions with justification during Session 3.
(4) Action list for Session 4
What needs to be done and list in priority order – most urgent first
What resources you need
How to determine if you successfully achieved your goals for this sessions

| **Activity 5** | System testing and result analysis | **20 minutes** (80 mins allocated, so 60 minutes remaining) |
|---|---|---|

Run your solution against your test plan and record performance using a test plan template.

| Test # | Purpose of test | Test method | Test data | Expected result | Actual result | Comments and justifications |
|---|---|---|---|---|---|---|
| | | | | | | |

Then analyze the results – i.e. how far the results show that the system meets the client brief.

| **Activity 4** | System assembly and programming | **60 minutes** (145 mins allocated, so 70 minutes remaining) |
|---|---|---|

Program your software solution for the task brief.
Note: There could/should be software stubs/hooks for un-implemented features.

## Session 5

| **Activity 1** | Task planning and system design changes | **10 minutes** |
|---|---|---|

Update Task Plan and Log Book.
(1) Date and Time updated
(2) General Comments – overview of planned work v achieved work during Session 4.
(3) Issues (problems) encountered and solutions with justification during Session 4.
(4) Action list for Session 5
What needs to be done and list in priority order – most urgent first
What resources you need
How to determine if you successfully achieved your goals for this sessions

| **Activity 4** | System assembly and programming | **40 minutes** (145 mins allocated, so 30 minutes remaining) |
|---|---|---|

Program your software solution for the task brief.
Note: There could/should be software stubs/hooks for un-implemented features.

| **Activity 5** | System testing and result analysis | **40 minutes** (80 mins allocated, so 20 minutes remaining) |
|---|---|---|

Run your solution against your test plan and record performance.

## Session 6

| **Activity 1** | Task planning and system design changes | **10 minutes** |
|---|---|---|

Update Task Plan and Log Book.
(1) Date and Time updated
(2) General Comments – overview of planned work v achieved work during Session 5.
(3) Issues (problems) encountered and solutions with justification during Session 5.
(4) Action list for Session 6
What needs to be done and list in priority order – most urgent first
What resources you need
How to determine if you successfully achieved your goals for this sessions

| **Activity 4** | System assembly and programming | **30 minutes** |
|---|---|---|

Program your software solution for the task brief.
Note: All the remaining un-implemented features, should be added here.

| **Activity 5** | System testing and result analysis | **20 minutes** |
|---|---|---|

Run your solution against your test plan and record performance.

| **Activity 6** | System in operation | **30 minutes** (180 mins allocated, so 150 minutes remaining) |
|---|---|---|

Document system in operation. Write operating instructions, technical manual and test results.

## Session 7

| **Activity 1** | Task planning and system design changes | **10 minutes** |
|---|---|---|

Update Task Plan and Log Book.
(1) Date and Time updated
(2) General Comments – overview of planned work v achieved work during Session 6.
(3) Issues (problems) encountered and solutions with justification during Session 6.
(4) Action list for Session 7
What needs to be done and list in priority order – most urgent first
What resources you need
How to determine if you successfully achieved your goals for this sessions

| **Activity 6** | System in operation | **80 minutes** (180 mins allocated, so 70 minutes remaining) |
|---|---|---|

Document system in operation.
Link photographs of hardware with screen grabs of matching software design
Suggest how the system could be improved to enhance the user experience.
Suggest how the system could be improved to handle unexpected events.

Write operating instructions, technical manual and test results.
Video the system in operation if possible.

## Session 8

| | | |
|---|---|---|
| **Activity 1** | Task planning and system design changes | **10 minutes** |

Update Task Plan and Log Book.
(1) Date and Time updated
(2) General Comments – overview of planned work v achieved work during Session 7.
(3) Issues (problems) encountered and solutions with justification during Session 7.
(4) Action list for Session 8
What needs to be done and list in priority order – most urgent first
What resources you need
How to determine if you successfully achieved your goals for this sessions

| | | |
|---|---|---|
| **Activity 6** | System in operation | **70 minutes** |

Document system in operation. Write operating instructions, technical manual and test results.
Video the system in operation if possible.

| | | |
|---|---|---|
| **Activity 1** | Task planning and system design changes | **10 minutes** |

Make sure Task Plan and Log Book are up to date.

Make sure your portfolio is complete and everything (Documents, Flowcharts, Software Source etc) contains your Name, Centre Number and Learner Registration Number as part of the file name and text in the file contains the same information.