Cambridge Assessment International Education

Cambridge International AS & A Level

INFORMATION TECHNOLOGY **9626/04**

Paper 4 Advanced Practical **For examination from 2025**

MARK SCHEME

Maximum Mark: 90

Specimen

This document has **16** pages.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptions for the question
- the specific skills defined in the mark scheme or in the generic level descriptions for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptions.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptions in mind.

Question	Answer	Marks
See below for example of task 1(a).		
1(a)	**Bookings table**	
	The correct fields are created – BookingID, CustomerID, VillaID, StartDate, NumberDays – allow other valid field names	**1**
	The data types are correct	**1**
	Customers table	
	All fields are included and four records are entered	**1**
	CustomerID is set as the Primary key	**1**
	Villas table	
	The correct fields are used – Name, Region, Sleeps, Pool = y/n	**1**
	An ID is used as the Primary key (there are repeated names in different regions)	**1**
	The records are unique – duplicates have been removed – 350 records shown	**1**
	Surcharges table	
	The Region field is used as the Primary key	**1**
	The correct data types are used	**1**
	Relationships	
	The database is normalised to 3NF	**1**
	All data types are correct, all naming conventions are followed	**1**
See below for example of task 1(b).		
1(b)	StartDate is restricted by use of Weekday() function	**1**
	Weekday([StartDate])=3 is used for Tuesday	**1**
	A validation rule is set on the NumberDays field	**1**
	The NumberDays is validated to multiples of 7	**1**
	The NumberDays is set to a maximum of 28	**1**
	There are suitable validation messages	**1**

Question	Answer	Marks
See below for example of task 1(c).		
1(c)	**Bookings form**	
	The logo is used, the title is correct, the header colour is correct, the NewBookingButton.png image is used	**1**
	All customer details fields are complete, the CustomerID field drop-down shows four fields	**1**
	All villa details fields are complete, the VillaID drop-down field shows five fields	**1**
	The CostPerDay calculation is correct (([Sleeps]*100)+(IIf([Pool]=-1,100,0)))*(1+[Surcharge])	**1**
	The StartDate field is shown, the NumberDays field is shown	**1**
	The EndDate field is shown, the EndDate calculation is correct [StartDate]+[NumberDays]	**1**
	The TotalCost field is shown The TotalCost calculation is correct [CostPerDay]*[NumberDays]	**1**
	All costs are shown as currency	**1**
	Formatting is as shown, ID labels are bold, bounding boxes are as shown in the question paper	**1**
	Users cannot edit or select ID fields or villa fields	**1**
	Users can select dates and enter the number of days	**1**
	Users cannot select or edit cost fields	**1**
	New customer data shows in the Customers table, CustomerID and villa data shows in the Bookings table	**1**

Question	Answer	Marks
See below for example of task 2.		
2	The image is circular	**1**
	The sea and the sky are in the correct proportions	**1**
	The sea is a single colour and the sky has a gradient fill	**1**
	The waves are the correct size and lighter than the sea and form the boundary between the sea and the island	**1**
	The island matches the position, is lighter than the sky and is the shape shown in the question paper	**1**
	The shape of all clouds match those shown in the question paper	**1**
	The size and position of all clouds match those shown in the question paper	**1**
	The position, shape and size of the tree on the right matches the tree shown in the question paper	**1**
	The position, shape and size of the tree on the left matches the tree shown in the question paper	**1**
	All palm leaves are identical in shape	**1**
	The shape of the palm leaf matches the shape shown in the question paper. The palm leaf has a curved back with three spikes	**1**
	The left tree has seven leaves in a variety of sizes	**1**
	The right tree has eight leaves in a variety of sizes	**1**
	The left tree leaves are darker than the leaves on the right tree as shown in the question paper	**1**
	The left tree is behind the right tree	**1**
	The position and overlap of the trees match the image in the question paper	**1**
	The background is transparent	**1**
	The clouds are opaque	**1**
	The image is the correct size (15 cm width and height)	**1**
	Tree_1, Tree_2 and Island Scene are saved in scalable vector graphic (.svg) format	**1**

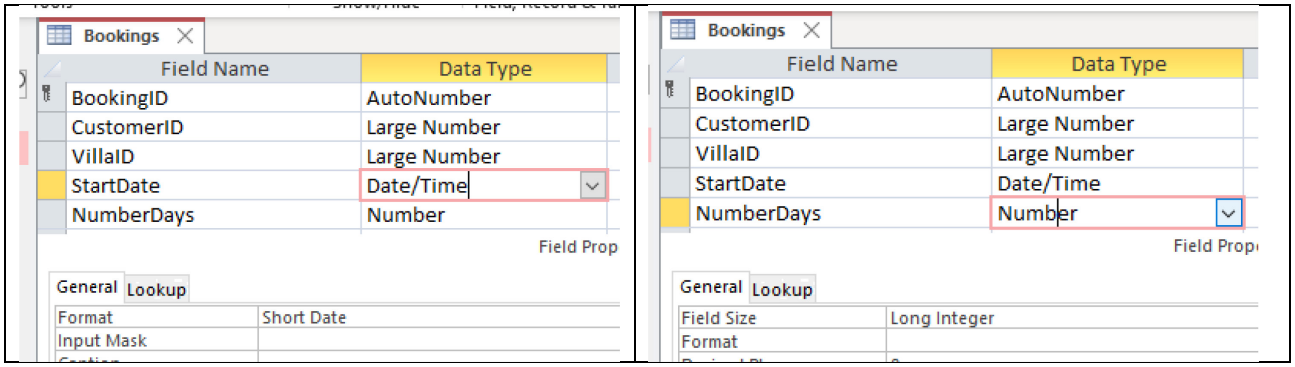
Question	Answer	Marks
See below for example of task 3.		
3	The Bird_1 image is created	**1**
	The shape of the Bird_1 image matches the shape shown in the question paper	**1**
	The Bird_2 image is created	**1**
	The shape of the Bird_2 image matches the shape shown in the question paper	**1**
	The bird enters from the left sea line as Bird_1	**1**
	Bird_2 is shown at position 2	**1**
	Bird_1 was tweened into Bird_2	**1**
	Bird_1 is shown at position 3, Bird_1 is smaller	**1**
	Bird_2 was tweened into Bird_1	**1**
	Bird_2 is shown at position 4	**1**
	Bird_1 was tweened into Bird_2	**1**
	Bird_1 is shown at position 5	**1**
	Bird_2 was tweened into Bird_1, Bird_1 is smaller	**1**
	The bird passes behind the trees	**1**
	Bird_2 is shown at position 6	**1**
	Bird_1 was tweened into Bird_2	**1**
	Bird_1 is shown at position 7	**1**
	Bird_2 was tweened into Bird_1, Bird_1 is smaller	**1**
	The bird exits the frame	**1**
	All tweenings are smooth and equal in length – the animation is saved as an animated .gif	**1**

Question	Answer	Marks
See below for example of task 4.		
4(a)	The first click of the button empties the answer cell	**1**
	The AnswerPlaceHolder is referenced in the code	**1**
	The AnswerPlaceHolder.value is used	**1**
	The AnswerPlaceHolder.value ="" (Null) is used	**1**
4(b)	A new question is displayed after each click	**1**
	Five questions are displayed	**1**
	A new page is displayed after five questions, the correct message is displayed	**1**
	The message is displayed on two lines	**1**
	An if () statement – if (QuestionNumber.. is used	**1**
	if (QuestionNumber >5 is used	**1**
	A Document.write statement is used	**1**
4(c)	The ‘Click to restart the quiz’ button resets the quiz and resets the page to the original state	**1**
	The ‘Click to restart the quiz’ button resets the quiz at any point the button is clicked	**1**
	document.getElementById("QuizButton").style.display statement is used	**1**
	style.display=”none” is used	**1**
4(d)	The ‘Start the quiz’ button is the only button displayed at the start	**1**
	The ‘Start the quiz’ button is hidden after the first click	**1**
	The ‘Next Question’ button replaces the first button – the buttons are static	**1**
	document.getElementById("NextButton").style.display is used	**1**
	style.display=inline is used	**1**

Task 1(a)

Bookings Table

The correct fields are created – BookingID, CustomerID, VillaID, StartDate, NumberDays – allow other valid field names	1
The data types are correct	1

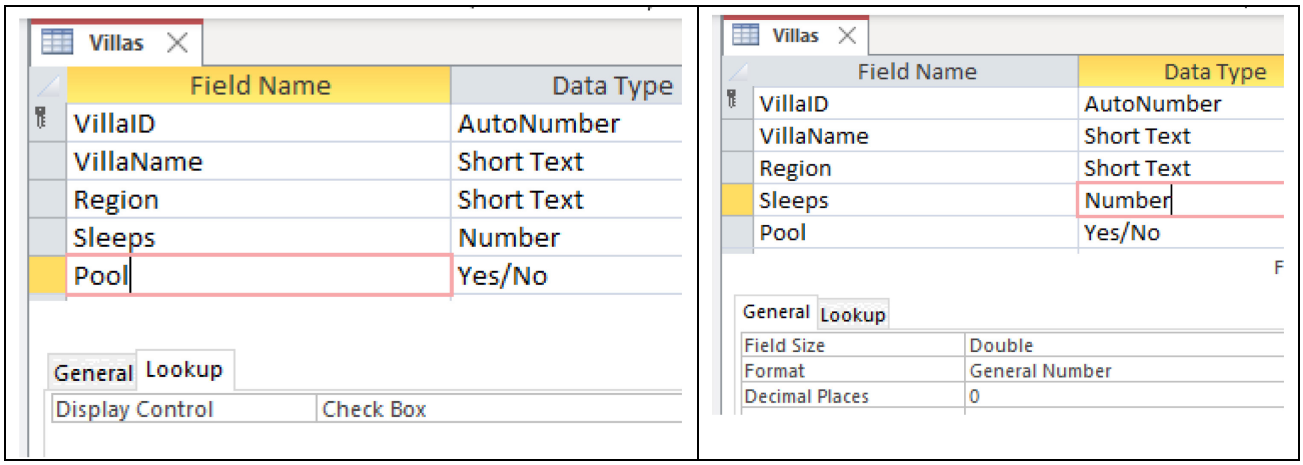


Customers table

All fields are included and four records are entered	1
CustomerID is set as the Primary key	1

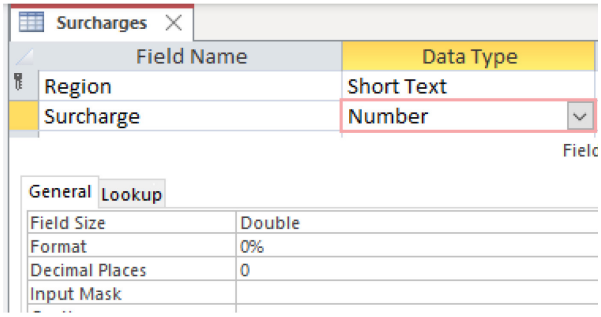
Villas table

The correct fields are used – Name, Region, Sleeps, Pool = y/n	1
An ID is used as the Primary key (there are repeated names in different regions)	1
The records are unique – duplicates have been removed – 350 records shown	1



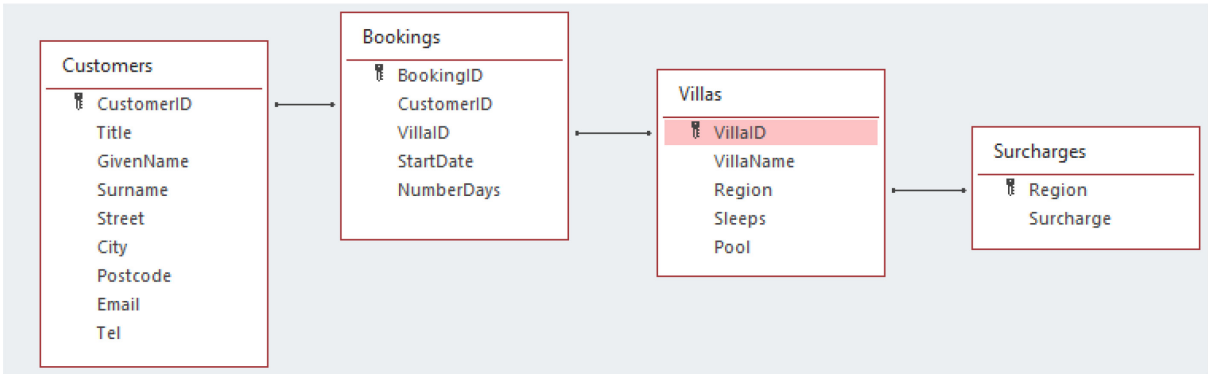
Surcharges table

The Region field is used as the Primary key	1
The correct data types are used	1



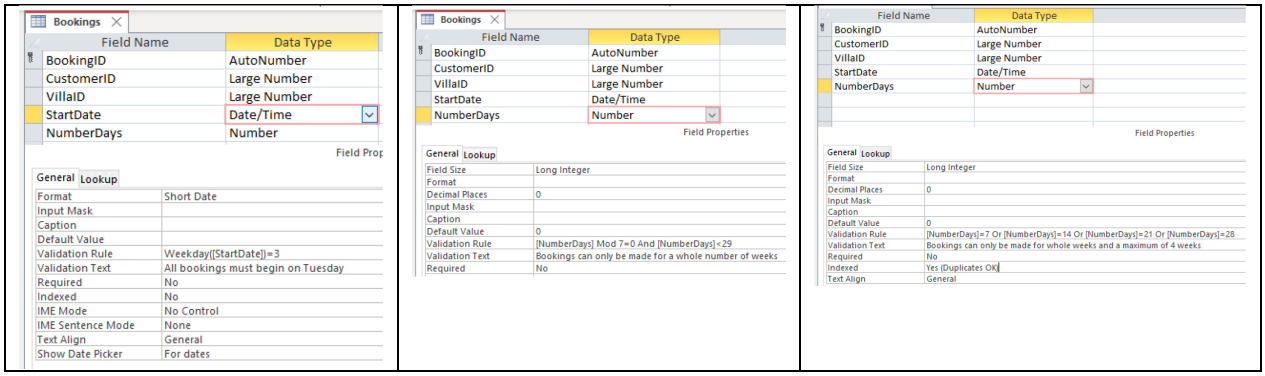
Relationships

The database is normalised to 3NF	1
All data types are correct, all naming conventions are followed	1



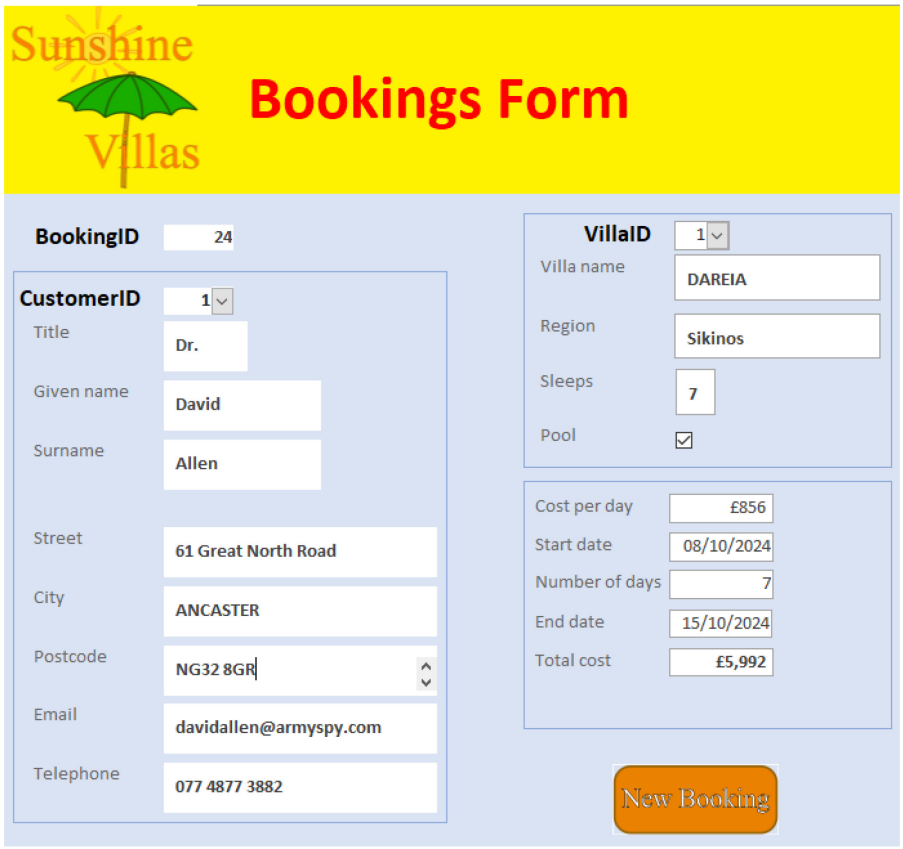
Task 1(b)

StartDate is restricted by use of Weekday() function	1
Weekday([StartDate])=3 is used for Tuesday	1
A validation rule is set on the NumberDays field	1
The NumberDays is validated to multiples of 7	1
The NumberDays is set to a maximum of 28	1
There are suitable validation messages	1

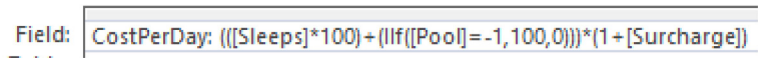


Task 1(c)

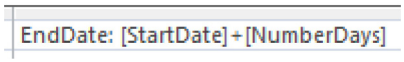
Bookings form



The logo is used, the title is correct, the header colour is correct, the NewBookingButton.png image is used	1
All customer details fields are complete, the CustomerID field drop-down shows four fields	1
All villa details fields are complete, the VillaID drop-down field shows five fields	1



The CostPerDay calculation is correct (([Sleeps]*100)+(IIf([Pool]=-1,100,0)))*(1+[Surcharge])	1
The StartDate field is shown, the NumberDays field is shown	1



The EndDate field is shown, the EndDate calculation is correct [StartDate]+[NumberDays]	1

TotalCost: [CostPerDay]*[NumberDays]

The TotalCost field is shown The TotalCost calculation is correct [CostPerDay]*[NumberDays]	1

All costs are shown as currency	1

Formatting is as shown, ID labels are bold, bounding boxes are as shown in the question paper	1

Users cannot edit or select ID fields or villa fields	1
Users can select dates and enter the number of days	1
Users cannot select or edit cost fields	1

New customer data shows in the Customers table, CustomerID and villa data shows in the Bookings table	1

Task 2

The image is circular	1
The sea and the sky are in the correct proportions	1
The sea is a single colour and the sky has a gradient fill	1
The waves are the correct size and lighter than the sea and form the boundary between the sea and the island	1
The island matches the position, is lighter than the sky and is the shape shown in the question paper	1
The shape of all clouds match those shown in the question paper	1
The size and position of all clouds match those shown in the question paper	1

The position, shape and size of the tree on the right matches the tree shown in the question paper	1
The position, shape and size of the tree on the left matches the tree shown in the question paper	1
All palm leaves are identical in shape	1
The shape of the palm leaf matches the shape shown in the question paper. The palm leaf has a curved back with three spikes	1
The left tree has seven leaves in a variety of sizes	1
The right tree has eight leaves in a variety of sizes	1
The left tree leaves are darker than the leaves on the right tree as shown in the question paper	1
The left tree is behind the right tree	1
The position and overlap of the trees match the image in the question paper	1

The background is transparent	1
The clouds are opaque	1
The image is the correct size (15cm width and height)	1
Tree_1, Tree_2 and Island Scene are saved in scalable vector graphic (.svg) format	1

Task 3

The Bird_1 image is created	1
The shape of the Bird_1 image matches the shape shown in the question paper	1
The Bird_2 image is created	1
The shape of the Bird_2 image matches the shape shown in the question paper	1

The bird enters from the left sea line as Bird_1	1
Bird_2 is shown at position 2	1
Bird_1 was tweened into Bird_2	1
Bird_1 is shown at position 3, Bird_1 is smaller	1
Bird_2 was tweened into Bird_1	1
Bird_2 is shown at position 4	1
Bird_1 was tweened into Bird_2	1
Bird_1 is shown at position 5	1
Bird_2 was tweened into Bird_1, Bird_1 is smaller	1
The bird passes behind the trees	1
Bird_2 is shown at position 6	1
Bird_1 was tweened into Bird_2	1
Bird_1 is shown at position 7	1

Bird_2 was tweened into Bird_1, Bird_1 is smaller	1
The bird exits the frame	1
All tweenings are smooth and equal in length – the animation is saved as an animated .gif	1

Task 4

4(a)	The first click of the button empties the answer cell	1
	The AnswerPlaceHolder is referenced in the code	1
	The AnswerPlaceHolder.value is used	1
	The AnswerPlaceHolder.value ="" (Null) is used	1
4(b)	A new question is displayed after each click	1
	Five questions are displayed	1
	A new page is displayed after five questions, the correct message is displayed	1
	The message is displayed on two lines	1
	An if () statement – if (QuestionNumber.. is used	1
	if (QuestionNumber >5 is used	1
	A Document.write statement is used	1
4(c)	The ‘Click to restart the quiz’ button resets the quiz and resets the page to the original state	1
	The ‘Click to restart the quiz’ button resets the quiz at any point the button is clicked	1
	document.getElementById("QuizButton").style.display statement is used	1
	style.display=”none” is used	1
4(d)	The ‘Start the quiz’ button is the only button displayed at the start	1
	The ‘Start the quiz’ button is hidden after the first click	1
	The ‘Next Question’ button replaces the first button – the buttons are static	1
	document.getElementById("NextButton").style.display is used	1
	style.display=inline is used	1

Example solution

```
<script>
//function to display the correct button - Start the quiz or Next Question
function Buttons ()
{
      document.getElementById("QuizButton").style.display ="inline";
      //displays the Start the quiz button
      document.getElementById("NextQButton").style.display="none";
      //hides the Next Question button
      document.getElementById("refresh").style.display="none";
      //hides the Restart the quiz button
}
Buttons(); //Invokes the Buttons function automatically
//Array of Questions 1 to 5
Questions=["What does 'RAM' stand for?","What does 'ROM' stand for?","What
does 'MICR' stand for?","What does 'DBMS' stand for?","What does 'QR' stand
for?"]

var QuestionNumber=0
//Question number counter

function changeContent(id, row, cell, content)
// Function to alter the contents of cells in the table
{
      AnswerPlaceHolder.value="";
      //Empties the cell for answers

      var x = document.getElementById(id).rows[row].cells;

      QuestionNumber++;
      //Question number counter is incremented
      if (QuestionNumber>5){document.write("<b><div
      align=center><br><br><h1>Quiz 1 complete.<br>Close your
      browser</h1></div></b>")};
      // Finishes the quiz after 5 questions

      x[cell].innerHTML   = QuestionNumber;
      // inserts the question number into the 1st cell in row 2
      x[cell+1].innerHTML = Questions[QuestionNumber-1];
      //Inserts the matching question in the 2nd cell of row 2

      document.getElementById("QuizButton").style.display ="none";
      //hides the Start the Quiz button
      document.getElementById("NextQButton").style.display="inline";
      //displays the Next Question button
      document.getElementById("refresh").style.display="inline";
      //displays the Restart the Quiz button
}

function refresh ()
//function to restart the quiz
{
      AnswerPlaceHolder.value="Type your answer here";
      location.reload();
}

</script>
```

