

**COMPUTER APPLICATIONS TECHNOLOGY: PAPER II**

Time: 3 hours

150 marks













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**PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY**

1. This question paper consists of 16 pages. Please check that your question paper is complete.
2. You must answer ALL the questions. Please read the entire question before attempting a solution. Do not do more than is required by the question.
3. Take note of the mark allocation to ascertain the solution required and the amount of time needed to spend on each question.
4. To assist yourself, get into the habit of saving regularly.
5. Make sure that your name appears on every task and on every document that you print out.
6. Follow the printing instructions carefully. Arrange your output in the correct order before submitting.
7. If a formula/function, such as a complicated *if* statement does not work, you may leave it out of the spreadsheet or database program, and write it down in a suitable place on the printout or copy and paste it to a suitable place in the screenshots document to obtain part marks. **Two marks will be allocated for screenshots.**
8. It is recommended that you make a backup copy of all database files **before** you start your examination.
9. All word processing documents should be set up as follows (unless other instructions are given):
  - The default for measuring units – centimetres (cm)
  - Language – English (South Africa)
  - Page size – A4
  - Margins – 2.54 cm
10. Note that you may use the *offline* help function available in each application.
11. All data files listed in Instruction 12 can be found on the network drive which has been allocated for this examination. Please note that all solutions must be saved to your examination folder on this network drive.

12. You have been supplied with 1 folder and 11 files in your examination folder. Refer to **Figure 1** below and check that the following folder and files exist in your examination folder:

**Figure 1**

Name	Type
 Props	File folder
 Budget	Microsoft Excel Worksheet
 CostumeInventory	Microsoft Access Database
 Doc1	Microsoft Word Document
 Fagin	JPG File
 PlayLength	Microsoft Excel Worksheet
 Programme	Microsoft Word Document
 Rehearsals	Microsoft Word Document
 Support	Microsoft Word Document
 TicketNo	Text Document
 TicketSales	Microsoft Excel Worksheet
 TicketTemplate	Microsoft Word 97 - 2003 Template

Read the scenario below which describes the background to the practical tasks you are required to perform.

### SCENARIO

The Drama teacher at your school wants to put on a production to raise funds. The money raised from the production will be donated to a children's orphanage close to your school. Your teacher has asked a few learners in the Drama Club to help with the arrangements. The Drama teacher has assigned certain tasks to you.

*Note the **Support** document will require screenshots for specific questions in this examination.*

[2]

Add your examination number in the header of the **Support** document.

### QUESTION 1

Your Drama teacher requires help with the managing of files before the production.

Record the answers to the following questions in the word processing **Support** document.

1.1 Some of the files in your examination folder are consuming a lot of storage space.

1.1.1 Group the files by size in your examination folder. (2)

*Capture a screenshot of Question 1.1.1 clearly displaying the files grouped by size. Paste the screenshot into the appropriate section in the Support document.*

1.1.2 Count the number of files over 100 kilobytes and record your answer in the **Support** document. (1)

1.1.3 The folder labelled **Props** has been prepared to be emailed but is missing an important file. Insert a copy of the spreadsheet labelled **Budget** into the **Props** folder. (1)

*Capture a screenshot of Question 1.1.3, clearly displaying the spreadsheet Budget in the Props folder. Paste the screenshot into the appropriate section in the Support document.*

1.1.4 Identify the compressed file in the **Props** folder and record your answer in the **Support** document. (1)

1.2 A mother has agreed to help backstage with the makeup and costume changes. Prepare the changes to the file **Doc1** to help the mother with her arrangements.

1.2.1 Open the file **Doc1** and read the contents. Suggest an appropriate filename based on the contents of the file. Record your answer in the appropriate section in the **Support** document. (1)

1.2.2 Rename the file **Doc1** using the filename suggested in Question 1.2.1 and save as a plain text document. (2)

1.3 The image **Fagin.jpg** will be used in the programme for the Drama production:

1.3.1 Find the amount of space the image **Fagin.jpg** takes up on the disk and record your answer in the **Support** document. (1)

1.3.2 Find the original author of the image **Fagin.jpg** and record the name in the **Support** document. (1)

Ensure your examination number is inserted in the header of the document.

Save and close the **Support** document.

**[10]**

**QUESTION 2**

The Drama teacher has set up a rehearsal schedule and has asked you to do the final formatting changes.

Open the word processing document **Rehearsals** and make the following changes:

- 2.1 Insert a row at the top of the table and insert the following column headings from left to right i.e. *Dates*, *Times*, *Cast required*. Refer to **Figure 2**. (3)

**Figure 2**

Dates	Times	Cast required
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- 2.2 Apply a double border around the headings in the first row of the table. Refer to **Figure 2**. (2)
- 2.3 Format the line spacing of the entire table to include a 6 pt space before each line of text. (2)
- 2.4 Make the following changes to the image positioned below the table:
- 2.4.1 Format the colour of the image to display in black and white only. (1)
- 2.4.2 Insert a caption, labelled *Oliver Twist*, to be displayed below the image. (2)
- 2.4.3 Acknowledge the source of the image by adding the reference [www.freeclipart.com](http://www.freeclipart.com) as a footnote in the document. (2)
- 2.5 Format the table to wrap around the text "\*Please bring...rehearsals" and the image. (2)

Add your examination number in the header of the document.

Save and close the **Rehearsals** document.

**[14]**

**QUESTION 3**

The Drama teacher has asked if there is a quicker way to generate tickets for the production. You suggest using a mail merge.

*Note: The form letter labelled **TicketTemplate** is constructed in a table format. The data source, labelled **TicketNo**, is a text file and contains duplicate ticket numbers. (The text file is an 'Enter' delimited text file).*

- 3.1 Process the mail merge and use the word processing document **TicketTemplate** as the form letter and the text file **TicketNo** as the data source. (2)
  - 3.2 Sort the data source list and arrange it in ascending order according to the ticket number. (2)
  - 3.3 Edit the data source **TicketNo** and remove all the duplicates. (2)
  - 3.4 Replace the text <<Number>> displayed in the first cell of the table with the field code **TicketNumber**. (1)
  - 3.5 Copy the field code **TicketNumber** to the appropriate position in all the remaining cells in the document. (1)
  - 3.6 Insert a rule in all the cells except for the first that will allow new ticket numbers to be inserted into every cell in the document. (2)
- Save the document which includes both the field code **TicketNumber** and rule as **Tickets2**.
- 3.7 Complete the mail merge process and save the completed merge as **Tickets3**. (1)

***Note:** If the mail merge is processed correctly all the tickets should be displayed on one page only.*

Add your examination number in the header of the document.

Save and close the documents **Tickets2** and **Tickets3**.

**[11]**

**QUESTION 4**

The programme for the production is nearing completion but needs a few minor adjustments.

Open and edit the word processing document **Programme** as follows:

- 4.1 The Drama teacher wants final approval of your changes and has therefore requested that you make use of Track Changes.
  - 4.1.1 Activate the Track Changes to track all the changes in the document. (1)
  - 4.1.2 Display all the review changes in the document in balloons. (1)
  - 4.1.3 Change the username of the Track Changes to your Examination Number. (1)

*Capture a screenshot of Question 4.1.3 clearly displaying your Examination number inserted as the username. Paste the screenshot into the appropriate section in the Support document.*

- 4.2 Format the page numbers to display only from the second page of the document. (1)
- 4.3 Insert a page break on page one, before the text THE CAST. (1)
- 4.4 Create a new heading style as follows:
  - 4.4.1 Apply the format: font size 14, font face Arial to the heading THE CAST. (1)
  - 4.4.2 Save the new heading style as **Programme**, based on the formatting of the heading THE CAST. (1)
  - 4.4.3 Apply the **Programme** heading style to the following heading:  
BACKSTAGE CREW (1)
- 4.5 Restrict the editing of the document to allow only Tracked changes. (2)
- 4.6 Enforce the protection of the document and do NOT add a password. (1)

Add your examination number in the header of the document.

Save and close the **Programme** document.

**[11]**

*Note that the **Support** document will be used to save screenshots of specific tasks in this question.*

## QUESTION 5

It is important to estimate the total length of the production, especially since musical items may take a long time to perform.

Open the spreadsheet **PlayLength** and note the workbook consists of two worksheets, namely **Sheet1** and **Sheet2**:

5.1 Delete the worksheet **Sheet1** as it is no longer required. (1)

Note all the changes indicated below must be applied to the worksheet labelled **Sheet2**.

5.2 Prepare the worksheet for printing by changing the settings of the paper size to A4. (1)

5.3 Format both columns D and H to a width of 5.5. (2)

5.4 Change the view of the worksheet to 90% and do not display gridlines. (2)

***Capture a screenshot of Question 5.4 clearly displaying the changed view of the worksheet. Paste the screenshot into the appropriate section in the Support document.***

5.5 Define a named range for the numbers shaded in red, i.e. cells H5, H12, H18 and H22. Label the named range ***music***. (2)

5.6 The Musical Items and time allocation for the Number of Scenes will total to a production time of 3 hours. The Drama teacher has decided to shorten the production time by selecting only 4 out of the 20 musical items to be performed. Note the cells of the 4 musical items selected are shaded in red.

Insert a function in cell D26 to find the **Total time of music selection (in minutes)** and make use of the named range ***music***, defined in Question 5.5, as the cell range in your solution.

***Note: If you do not know the function to be used in cell D26, simply enter the amount 20. You will not be awarded any marks for typing in the correct amount, but it will allow you to move onto the next question.***

(3)

5.7 Insert a formula in cell D27 to determine the **Estimated duration of the production (in hours)** by adding the **Total time of scenes (in minutes)** and **Total time of music selection (in minutes)**. (2)

Add your examination number in the header of the worksheet.

Save and close the workbook **PlayLength**.

[13]



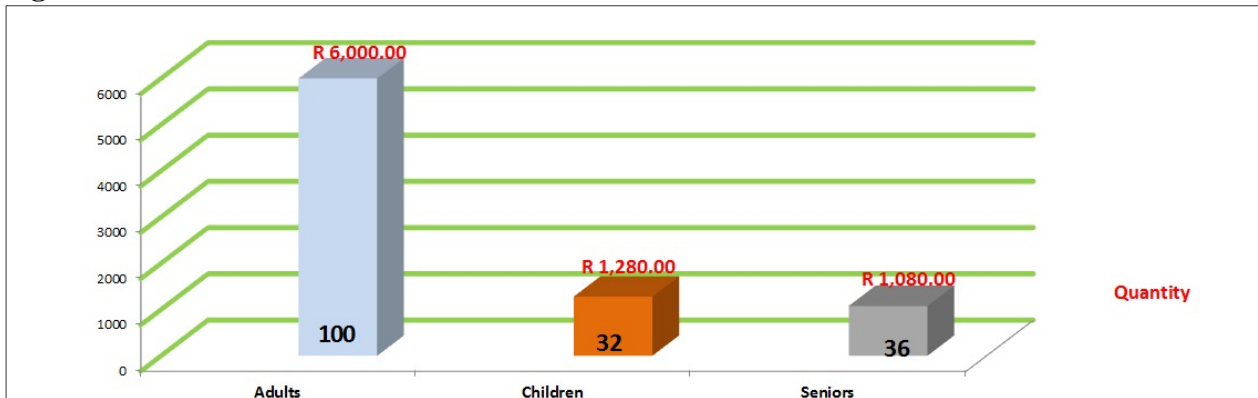
*Note that the **Support** document will be used to save screenshots of specific tasks in this question.*

## QUESTION 6

A spreadsheet has been used to keep track of ticket sales for the production.

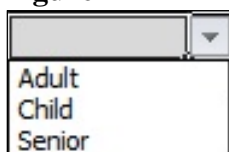
Open the spreadsheet **TicketSales** and note the workbook consists of three worksheets, namely **Graph**, **SeatingPlan** and **ProjectedSales**.

**Figure 3**



- 6.1 Select the worksheet labelled **Graph**. Refer to **Figure 3**.
  - 6.1.1 Format the vertical y-axis to display the amounts in Rands. (1)
  - 6.1.2 Adjust the vertical y-axis to display a minimum value of R1000 and a maximum value of R7000. (2)
  - 6.1.3 Apply any suitable texture fill to the whole chart area. (1)
- 6.2 Select the worksheet labelled **SeatingPlan** and apply the following changes:
  - 6.2.1 Adjust the cells H17 to J17 to display the numbers in the appropriate Currency format. (1)
  - 6.2.2 Insert a field code to display the current date in the footer area. (2)
  - 6.2.3 Apply a data validation list in cell E3 and use the text **Adult**, **Child** and **Seniors** in cells H16 to J16 as the source. Apply an autofill to expand the data validation from cells E3 to N14. Refer to **Figure 4**. (3)

**Figure 4**



**Capture a screenshot of Question 6.2.3 clearly showing the data validation list in cell E3. Paste the screenshot into the appropriate section in the Support document.**

- 6.2.4 Insert a formula in cell Q20 that will determine the total price of all the tickets sold for Adults in Group2 (i.e. the range P3 to Q14). The formula should include the total number of Adults in Group2 multiplied by the cost of each Adult ticket (cell H17). (4)
- 6.2.5 The values for tickets sold for Group3 is an estimate. The school auditorium seats 168 maximum. Group1 and Group2 are sold out and account for 48 of the 168 seats. The remaining unsold tickets of 120 are divided by three to estimate the tickets for Adults, Children and Seniors.
- Use the information provided above, and devise a formula in cell I22 to estimate the total price of tickets sold for Seniors in Group3. (3)
- 6.2.6 Copy the contents (including the formatting) in cells I25 to I27 from the **SeatingPlan** worksheet and paste it into cells C7, D7 and E7 in the **ProjectedSales** worksheet. (2)
- 6.3 Select the worksheet labelled **ProjectedSales** and apply the following changes:
- 6.3.1 Activate comments to display all the comments in the workbook. (1)
- 6.3.2 The dates of the performances are displayed in cells B4 to B8 and will be used to generate a unique reference for each day of the week. To create the reference insert a formula in cell A4 to combine the text displayed in cell A3 (include as an absolute cell reference) with the number of characters in cell B4. Include spacing as indicated in the example: **Reference 14**. Expand the formula to cells A5 to A8. (6)
- 6.3.3 Insert a function in cell B12 that will display the **Highest total ticket sales for the week**. (2)
- 6.3.4 Insert a function in cell B13 to indicate the **Average total ticket sales for the week**. (2)
- 6.3.5 An anonymous donor will contribute R5000 for each performance if ticket sales exceed R8000. Insert a function in cell G4 to insert an amount of R5000 if the total tickets sales for the first performance exceeds R8000 otherwise an amount of R0.
- Note:** The amount in cell G1 must be included as an absolute cell reference to ensure that the function can be expanded to other cells. Expand the function to cells G5 to G8. (5)
- 6.3.6 Insert a formula in cell B15 to determine the **Total funds raised for SA Orphanage**. HINT: **Total ticket sales for the week plus Total donated less Expenses**. (3)

Add your examination number as a header to each worksheet.

Save to update the changes to the workbook **TicketSales**.

Save, but do not close the **Support** document.

[38]

*Note that the **Support** document will be used to save screenshots of specific tasks in this question.*

## QUESTION 7

Your school and several other schools in the surrounding area have compiled a database collection of costume inventory. The database includes an inventory list of all costumes hired out to various schools. The database does not include a list of schools in order to track the location of costumes. You decide to make improvements to the database to make it more efficient.

Open the database **CostumeInventory** and apply the following changes:

7.1 Open the table **tblOrders** in Design View to make a few adjustments:

7.1.1 Change the field properties of the field **orderID** to align the data on the left. (1)

*Capture a screenshot of Question 7.1.1 clearly showing the table **tblOrders** in Design View showing the field properties for the field **orderID**. Paste the screenshot into the appropriate section in the Support document.*

7.1.2 Set the fields **dateHired** and **dateReturned** to a Date data type. (2)

*Capture a screenshot of Question 7.1.2 clearly showing the table **tblOrders** in Design View showing the data type for the fields **dateHired** and **dateReturned**. Paste the screenshot into the appropriate section in the Support document.*

7.1.3 Insert a custom date format to display as the example **19/10/2013** and apply it to both the fields **dateHired** and **dateReturned**. (4)

*Capture a screenshot of Question 7.1.3 clearly showing the table **tblOrders** in Design View showing the customised date display for the fields **dateHired** or **dateReturned**. Paste the screenshot into the appropriate section in the Support document.*

7.2 Create a new table labelled **tblSchools**. Choose the most appropriate data types for each of the following fields.

7.2.1 Insert a field labelled **schoolID** and choose an appropriate number format for the field to allow the table **tblSchools** to link to other tables with one-to-many relationships. (1)

*Capture a screenshot of Question 7.2.1 clearly showing the table **tblSchools** in Design View showing the number format for the field **schoolID**. Paste the screenshot into the appropriate section in the Support document.*

7.2.2 Insert a field labelled **schoolName** and change the field size to accept a maximum of 60 characters only. (1)

7.2.3 Update the field properties of the field **schoolName** to make it compulsory for data to be captured in this field. (1)

*Capture a screenshot of Question 7.2.3 clearly showing the table **tblSchools** in Design View showing the field properties for the field **schoolName**. Paste the screenshot into the appropriate section in the Support document.*

- 7.2.4 Set the primary key for the most appropriate field to uniquely identify each record.

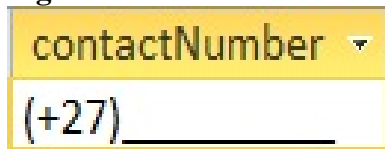
(1)

*Capture a screenshot of Question 7.2.4 clearly showing the table **tblSchools** in Design View showing the field selected as the primary key. Paste the screenshot into the appropriate section in the Support document.*

- 7.2.5 Include a field labelled **contactNumber** and insert an Input Mask to automatically display the international dialling code (+27) and allow for a maximum of 9 optional entries of numbers, i.e. (landline or mobile numbers). An example of acceptable entries are (+27) 11 2222222 or (+27) 22222222. Indicated in **Figure 6**, is an example of an entry displayed in Datasheet View.

(4)

**Figure 6**



*Capture a screenshot of Question 7.2.5 clearly showing the table **tblSchools** in Design View showing the field properties for the field **contactNumber**. Paste the screenshot into the appropriate section in the Support document.*

Save and close the table **tblSchools**.

- 7.3 Open the table **tblCostumes** in Design View and insert a new field **schoolID**. Use a Lookup wizard to look up the field **schoolID** from the table **tblSchools**.

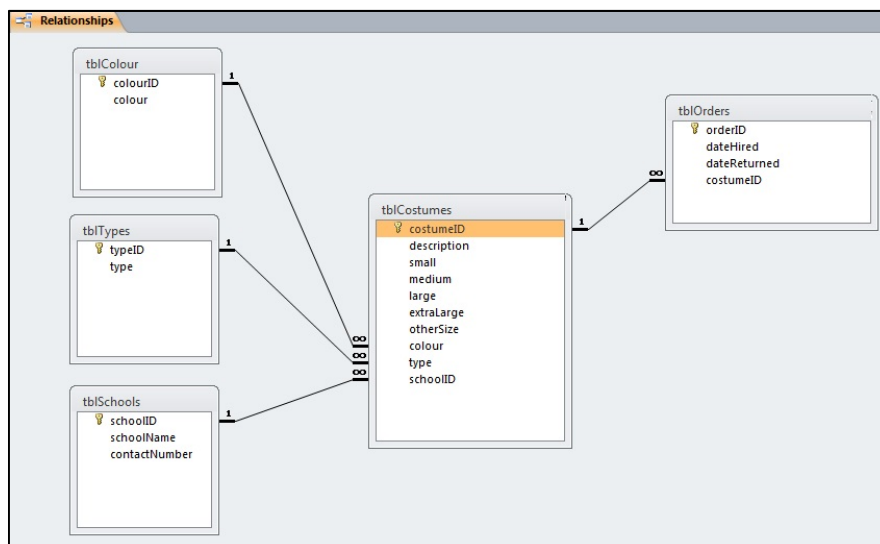
(2)

Save and close the table **tblCostumes**.

7.4 A one-to-many relationship between the tables **tblColour**, **tblCostumes**, **tblOrders** and **tblTypes** has been created. Edit the relationship as follows:

7.4.1 Build a one-to-many relationship between the tables **tblSchools** and **tblCostumes** and enforce referential integrity. Refer to **Figure 7** below. (2)

**Figure 7**



*Capture a screenshot of Question 7.4.1 clearly showing the one-to-many relationship. Paste the screenshot into the appropriate section in the Support document.*

Close and save the changes to the relationship.

7.5 Open the form **frmCostumes** and make the following changes. Refer to **Figure 8**.

**Figure 8**

7.5.1 Add the table **tblSchools** as a subform in the form **frmCostumes**. Label the subform **frmSchools**. (3)

7.5.2 Resize the subform **frmSchools** to view all the contents clearly. (1)

7.5.3 Position the subform **frmSchools** on the right side. (1)

7.5.4 Insert a command button in the detail area, to display the text *Refresh*, to refresh the contents of the form. (2)

*Capture a screenshot of Question 7.5.4 clearly showing the form frmCostumes in Form View showing the subform frmSchools as indicated in Figure 8. Paste the screenshot into the appropriate section in the Support document.*

Save and close the form **frmCostumes**.

Use the tables **tblCostumes**, **tblColour** and **tblTypes** to provide solutions to the following:

Mrs Smith, the mother in charge of the wardrobe for the production, has asked you to search the database **CostumeInventory** to find various items. Run the following queries:

7.6 Create a query labelled **qryTops**. Display the following fields in the tables **tblCostumes: costumeID, description, tblTypes: type** and **tblColour: colour**. Insert criteria to find all the black Lycra tops. (4)

*Capture a screenshot of Question 7.6 clearly showing the query qryTops in Design View showing the criteria to meet the requirements. Paste the screenshot into the appropriate section in the Support document.*

7.7 Create a query labelled **qryHankies**. Display the fields **costumeID, description, small, medium** from the table **tblCostumes**. Insert criteria to find all the handkerchiefs and bandanas. Include a function to determine the total number of handkerchiefs and bandanas in all the small and medium sizes. (4)

*Capture a screenshot of Question 7.7 clearly showing the query qryHankies in Design View showing the criteria to meet the requirements. Paste the screenshot into the appropriate section in the Support document.*

7.8 You are unsure about the duplicate values in the table **tblCostumes** and decide to create a query to analyse the data more closely. Create a select query labelled **qryDuplicates** and display only the **description** field. Insert criteria to count the number of duplicates per **description** field. (4)

*Capture a screenshot of Question 7.8 clearly showing the query qryDuplicates in Design View showing the criteria to meet the requirements. Paste the screenshot into the appropriate section in the Support document.*

7.9 Compile a blank report labelled **rptType**. Use the fields **typeID** and **type** in the report **rptType**. Apply a filter to display all the types except for vests. (3)

Include your examination number in the report footer and print the report **rptType**.

7.10 Use all the fields from the query labelled **qryMiscellaneous** to:

7.10.1 Create a report labelled **rptMiscellaneous**. (1)

7.10.2 Sort the information in the report in ascending order according to the **description**. (2)

7.10.3 In Design View apply conditional formatting to the field **otherSize**, to highlight values over 10 in a red font colour. (3)

7.10.4 Insert an expression builder in the report footer area to determine the total number of records displayed in the report. Include a label **Total records** to the left of the calculation. (3)

*Capture a screenshot of Question 7.10.4 clearly showing the report **rptMiscellaneous** in Design View clearly displaying the expression builder in the report footer area. Paste the screenshot into the appropriate section in the Support document.*

7.10.5 Insert your examination number in the report header. (1)

Close and save the changes to the report **rptMiscellaneous**.

Save and close the **Support** document.

[51]

**Total: 150 marks**

**PRINTOUTS**

*Produce the following output, ensuring that your examination number is displayed on each printout.*

**QUESTION 1**

- Print the **Support** document.

**QUESTION 2**

- Print the **Rehearsals** document.

**QUESTION 3**

- Print the **Tickets2** document showing the inserted field name ***Ticket number***.

**QUESTION 4**

- Print the **Programme** document showing the Tracked changes.

**QUESTION 5**

- Print the following worksheet from the spreadsheet **PlayLength: Sheet2** clearly showing all formulae.

**QUESTION 6**

- Print the following worksheets from the spreadsheet **TicketSales**:  
**Graph** worksheet clearly showing the data, comments and the **Ticket Sales** graph.  
**SeatingPlan** worksheet clearly showing all formulae and comments.  
**ProjectedSales** worksheet clearly showing all formulae and comments.

**QUESTION 7**

- Print the reports **rptMiscellaneous** and **rptType** from the database **CostumeInventory**.