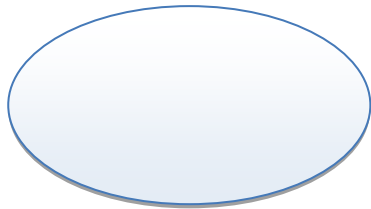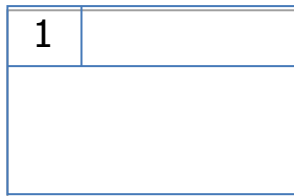# Data Flow Diagram Workbook

1. What is the purpose of a Data Flow Diagram?
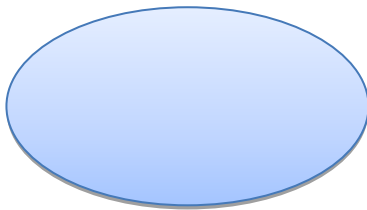
2. Tick the box to indicate which shape represents data flow
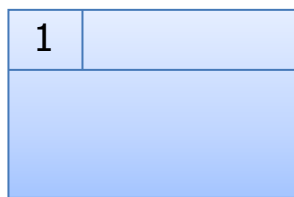
Label ☐

☐
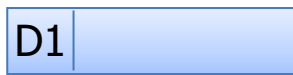
1	

☐

3. Tick the box to indicate which shape represents a process

☐

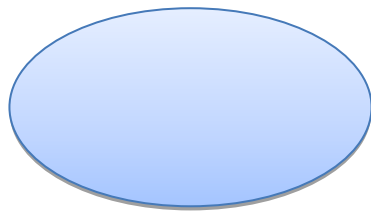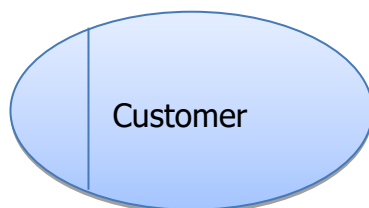Label ☐

1	

☐

4. Tick the box to indicate which shape represents an external entity

Label → ☐

D1 ☐

☐

5. If you wanted to show that more than one customer was part of the diagram, which one of the following shapes would you use?

3 Customers ☐

Customer ☐

3 Customer ☐

2

6. A customer places an order. This order is then processed by the company and a paper invoice is raised.

The DFD below represents this procedure.

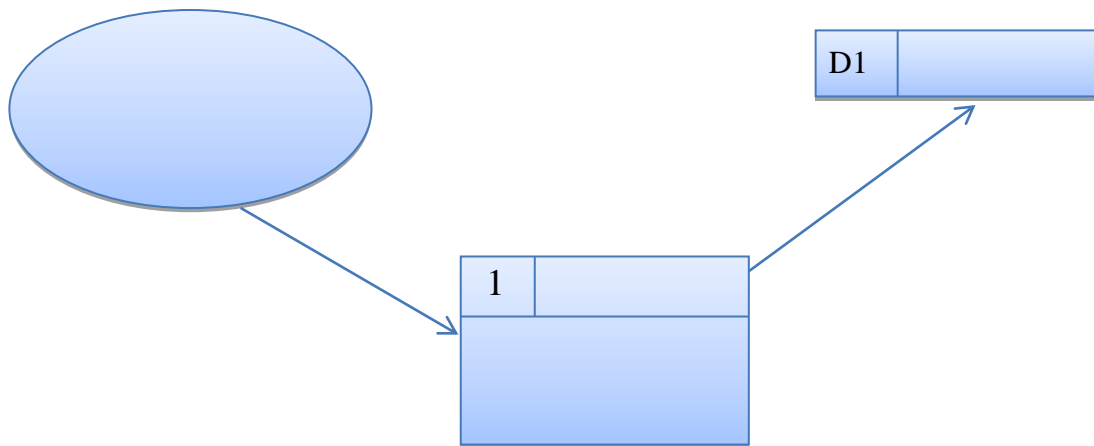Place each of the labels in the text boxes into their correct location in the DFD.
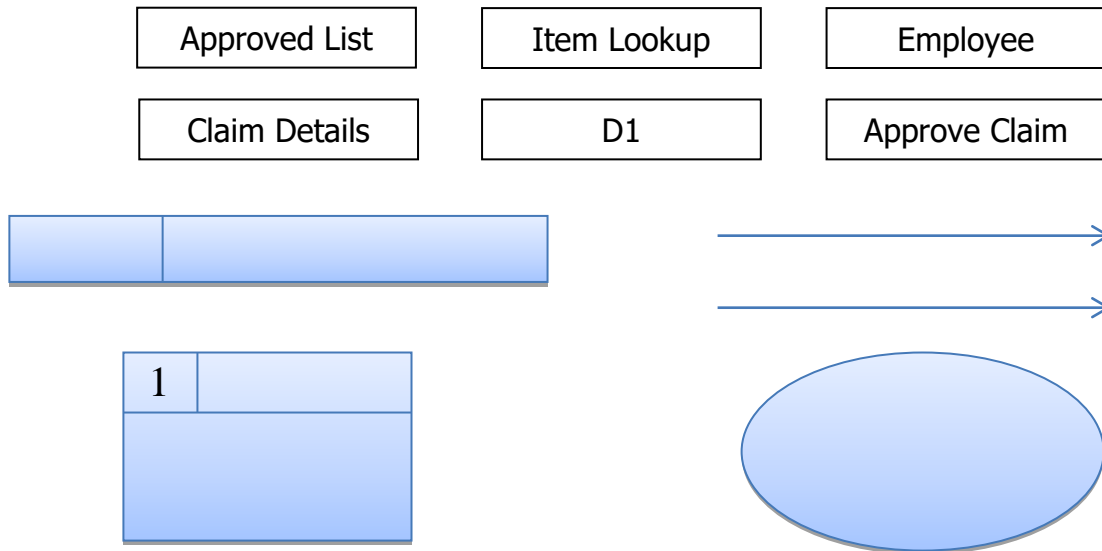
Customer	Items required	Set up order

Order details	Invoice

D1

1

7. An employee wants to submit an expense claim to his company, but before doing so, he needs to check that the items he is claiming for are on the company's approved list of expenses.

Rearrange the elements below to create a DFD which will show this process.

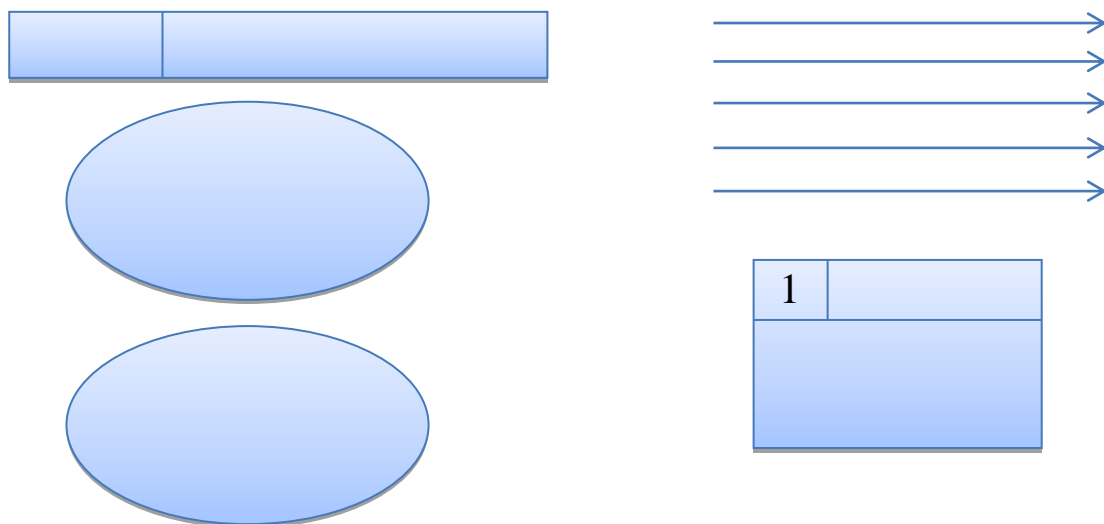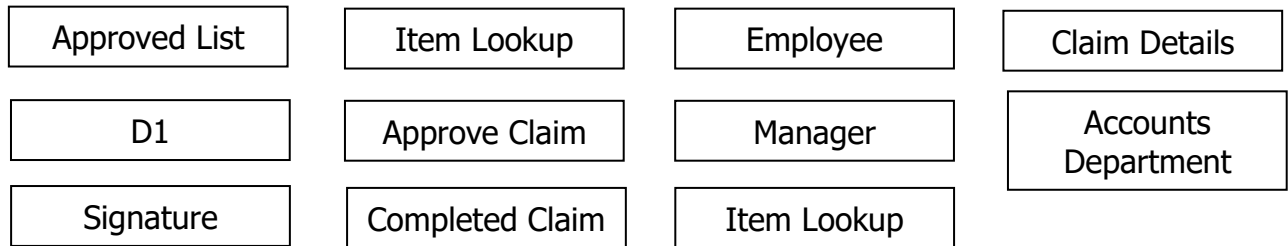| Approved List	Item Lookup	Employee
Claim Details	D1	Approve Claim

8. In this exercise, the same employee is making a claim, but now his manager also needs to include his signature as part of the process.

The manager also uses the approved list to check the claim.

The approved claim then goes to the accounts department.

Rearrange the elements below to create a DFD which will show this process.

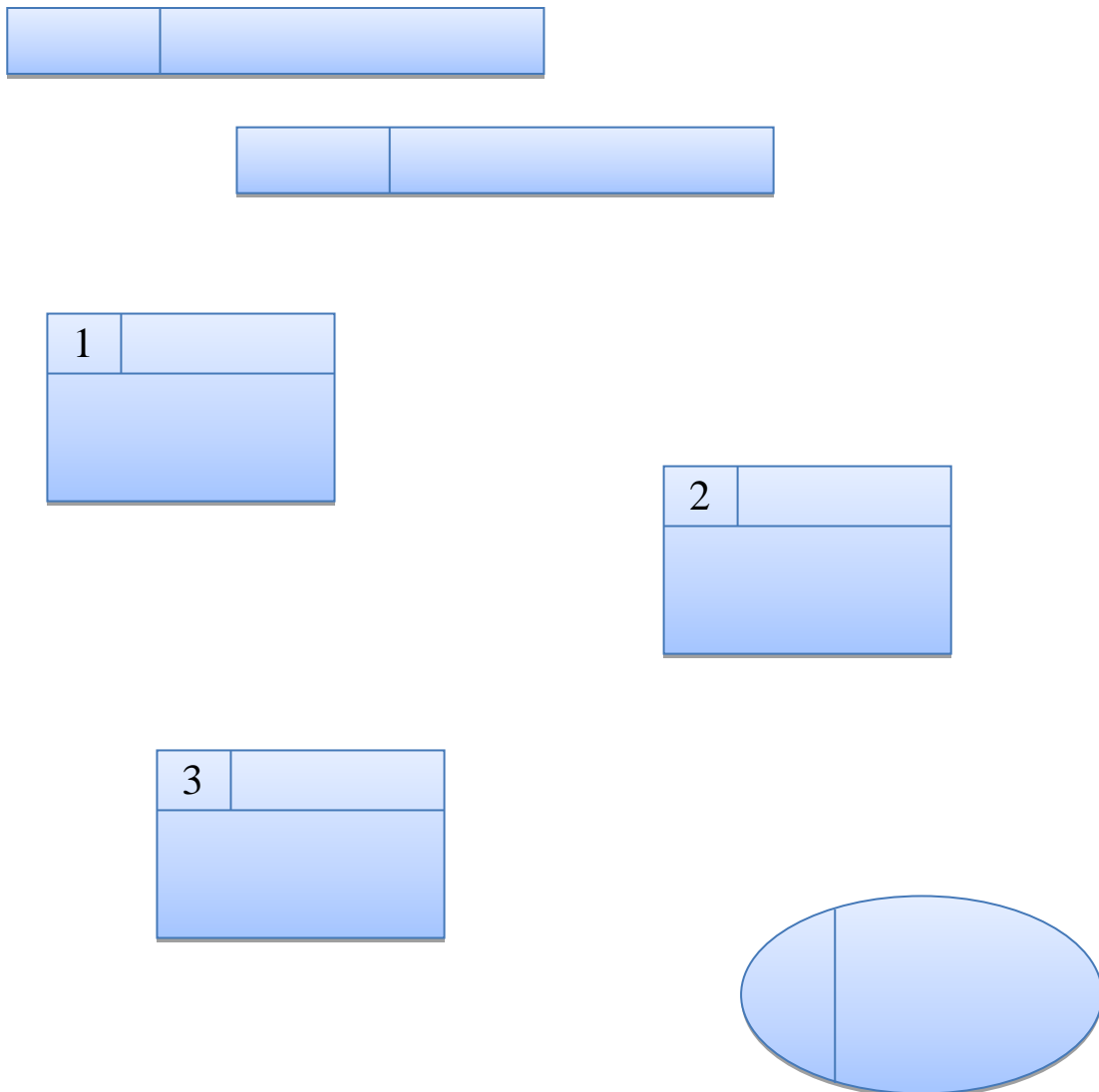|			
Approved List	Item Lookup	Employee	Claim Details
D1	Approve Claim	Manager	Accounts Department
Signature	Completed Claim	Item Lookup	

9. A marketing department of a large company sends mail merged letters to its customers to tell them about a new product that will be launched shortly.

The steps in this process are:

- Read Name and Address from a customer data file
- Read the main letter from a template file
- Mail merge the two data sets to produce a mail merged letter for each customer
- Print the letter directly without saving the file
- Prepare a literature pack and post to each customer

Add suitable labels and arrows to complete the DFD below:
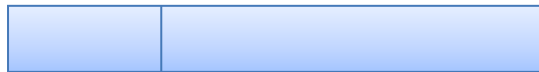
Answer:

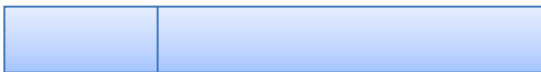| 1	

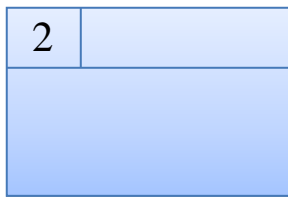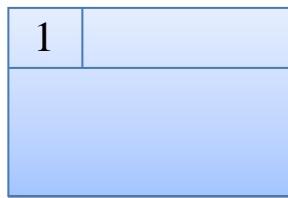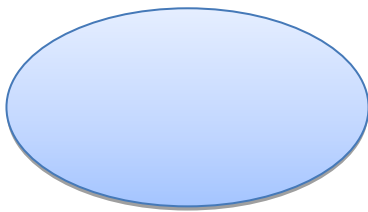| 2	

3	

10. Susan is preparing to add a new set of tracks into her music library on her personal computer. She wants to 'rip' the tracks from one of her CDs.
These are the steps she takes to do this:

- Place CD in the computer's CD drive
- CD drive reads each track
- The ripping software converts each track into an mp3 file
- Each mp3 file is stored on the hard disk
- As each file is created, the music library is updated with its title and other details

Add the labels and arrows to complete the DFD for this procedure.

Answer:

11. A customer wants to order some items from a company over the telephone. They have a trade account that lets them order without paying immediately.
This are a list of the procedures that take place to fulfil the order:

- Customer phones and a sales person answers it
- Sales person asks for the item codes they want to order
- Sales person looks up if each item is in stock
- All items in stock are included in the order
- The total cost of the order is calculated by looking up the price of each item in the order
- Customer is given the order that can be delivered and its total cost
- Customer accepts or declines the order
- Accepted orders are sent to the despatch department
- Declined orders are cancelled

Sketch a DFD diagram to show this procedure