

PRE-RELEASE MATERIAL 2210/22 MJ-2022




Your preparation for the examination should include attempting the following practical tasks by **writing and testing a program or programs**.

A program is needed to allow a Wildlife Park to sell tickets. A booking consists of one or more tickets for the same day(s) and can be made up to a week in advance. A booking can be made for a visit of one day or two consecutive days. A booking can have extra attractions included. A booking will be valid for the day(s) chosen only.

Ticket type	Cost for one day	Cost for two days
one adult	\$20.00	\$30.00
one child (an adult may bring up to two children)	\$12.00	\$18.00
one senior	\$16.00	\$24.00
family ticket (up to two adults or seniors, and three children)	\$60.00	\$90.00
groups of six people or more, price per person	\$15.00	\$22.50




Extra attraction	Cost per person
lion feeding	\$2.50
penguin feeding	\$2.00
evening barbecue (two-day tickets only)	\$5.00

Write and test a program or programs for the Wildlife Park:





-  Your program or programs must include appropriate prompts for the entry of data. Data must be validated on entry.
-  All outputs, including error messages, need to be set out clearly and understandably.
-  All variables, constants and other identifiers must have meaningful names.

You will need to complete these three tasks. Each task must be fully tested.

Task 1 – Displaying the ticket options and the extra attractions available Set up your program to:

-  Display the options, attractions and prices for one-day tickets
-  Display the options, attractions and prices for two-day tickets
-  Show the days available for booking; assume that there are tickets available for any valid day.

Task 2 – process a booking Extend your program for Task 1 to:

-  Input the tickets and extra attractions required, then calculate the total cost of the booking
-  Allocate a unique booking number
-  Display the booking details, including the total cost and the unique booking number
-  Repeat as required.

Task 3 – Ensuring each booking is the best value Check that the total for each booking gives the best value and offer an alternative if this is not the case. For example, buying two family tickets is better than a group ticket for a group of 10 that includes four adults and six children.

Pre Release solution Complete PSEUDOCODE

1: TASK 1

```

DECLARE tickettype():String={"OneAdult","OneChild","Onesenior","FamilyTicket", "GroupTicket"}
DECLARE onedaybooking() : REAL = {20, 12, 16, 60, 15}
DECLARE twodaybooking() : REAL = {30, 18, 24, 90, 22.5}
DECLARE numoftickets : Integer
DECLARE ticketselected, bookingday, bookingID As Integer
DECLARE extraattraction = {"Lionfeed", "Penguinfeed", "Barbecue(only 2day ticket)"}
DECLARE extraattractioncost = {2.5, 2, 5}
DECLARE choice, extrachoice, familygroup : Boolean
DECLARE cost, extraselected : REAL
For count = 1 To 5
    PRINT ("Ticket type = ", tickettype(count), ":", "Cost1 Day="onedaybooking(count), ":"
, "Cost 2 day =", twodaybooking(count))
Next
    PRINT ("Extra attraction options are displayed below:")
For count = 1 To 3
    PRINT ("Attraction", extraattractioncost(count), "=", extraattraction(count))
Next

```

2: Task2

```

PRINT ("Do you want to buy tickets? True for Yes, false for no ")
PRINT ("Enter Ticket Category number: 1= OneAdult , 2 = OneChild,
        3 = Onesenior 4 = Family Ticket, 5 = Group ticket")
INPUT ticketselected
    If ticketselected = 5 Then
        PRINT ("Is this family group?{True} for yes and {False} for No")
        INPUT familygroup
    End If
PRINT ("Confirm booking for Oneday or Twodays? 1=1 day, 2= two days")
INPUT bookingday
PRINT ("enter number of tickets")
INPUT numoftickets
bookingID = bookingID + 1 //BookingID is unique & and works like Autonumber
    If bookingday = 1 Then
        cost = numoftickets * onedaybooking(ticketselected)
    ElseIf bookingday = 2 Then
        cost = numoftickets * twodaybooking(ticketselected)
    End If
PRINT("Your BookingID for this booking is: " , bookingID)
PRINT("Cost of ticket:",tickettype(ticketselected),"tickets=",numoftickets," Cost=",cost)
PRINT ("Do you want Extra attraction? True for Yes, False for No")
INPUT extrachoice
IF extrachoice = True Then
    PRINT ("Extra choice num: 1= Lionfeed, 2= Penguinfeed, 3= Barbecue")
    INPUT extraselected
    WHILE extraselected =3 AND bookingday =1 //Validation check "Barbeque on TwoDayBooking"
        PRINT ("Barbecue is available for TwodayBooking only, Input again")
        INPUT extraselected
    END WHILE
    cost = cost + extraattractioncost(extraselected)
    PRINT ("Cost of:",tickettype(ticketselected), " Num of tickets:", numofticket,
    "+", extraattraction(extraselected), "TOTAL=", cost)
Else
    PRINT (" Your Total cost:", tickettype(ticketselected)," Num of tickets: ",
    numoftickets," No attraction ", " Cost = ", cost)
END IF

```

3: Task 3

```
DECLARE bestoffer: REAL
```

```
PRINT (***** BEST OFFER *****)
```

```
If ticketselected = 5 And bookingday = 1 And numoftickets >= 6 And familygroup = True
Then
```

```
    bestoffer = (onedaybooking(4) * (numoftickets / 5)) - extraselected //Family ticket
    offered
```

```
        PRINT ("Best Offer: = " & bestoffer)
```

```
ElseIf ticketselected = 5 And bookingday = 2 And numoftickets >= 6 And familygroup = True
Then
```

```
    bestoffer = twodaybooking(4) * (numoftickets / 5) - extraselected
```

```
    PRINT ("Best Offer: = " & bestoffer)
```

```
ElseIf ticketselected = 1 And bookingday = 1 And numoftickets >= 6 Then 'if more than 5
adults in adult ticket, Group tickets ofered
```

```
    bestoffer = (onedaybooking(5) * numoftickets) - extraselected
```

```
    PRINT ("Best Offer: = " & bestoffer)
```

```
ElseIf ticketselected = 1 And bookingday = 2 And numoftickets >= 6 Then
```

```
    bestoffer = (twodaybooking(5) * numoftickets) - extraselected
```

```
    PRINT ("Best Offer: = " & bestoffer)
```

```
ElseIf ticketselected = 3 And bookingday = 1 And numoftickets >= 6 Then 'if more than 5
seniors in adult ticket, Group tickets ofered
```

```
    bestoffer = (onedaybooking(5) * numoftickets) - extraselected
```

```
    PRINT ("Best Offer: = " & bestoffer)
```

```
ElseIf ticketselected = 3 And bookingday = 2 And numoftickets >= 6 Then 'if more than 5
seniors in adult ticket, Group tickets ofered
```

```
    bestoffer = (twodaybooking(5) * numoftickets) - extraselected
```

```
    PRINT ("Best Offer: = " & bestoffer)
```

```
Else
```

```
    bestoffer = 0
```

```
    PRINT("No Best offer for this selection category, Best Offer= " & bestoffer)
```

```
End If
```

```
If bestoffer > 0 Then
```

```
    PRINT ("Take BEST offer & save = " & cost - bestoffer)
```

```
    PRINT ("Best offer = : " & bestoffer & " For Best offer do a NEW Booking: True
    for Yes, false for no (Do you want new Booking?) ")
```

```
    INPUT choice
```

```
    If choice = True Then
```

```
        GoTo 2:Task 2 // Goes to Task2 for New Booking
```

```
    Else
```

```
        PRINT ("BestOffer not selected")
```

```
    End If
```

```
End If
```

```
// If only Task 3 is asked in exam you can write GOTO Task1/Task2 to run Task1/2 again
```

```
PRINT ("Ticket Type: " & tickettype(ticketselected) & " , Number =" & numoftickets & " ,
Cost =" & cost)
```

```
PRINT ("Cost of:", tickettype(ticketselected),"Num of tickets", numoftickets,"=" ,cost)
```