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 VB-Code

```vb
Imports System

Module Program
    Sub Main(args As String())
1:          'TASK 1

Console.WriteLine("---------------------------Wild Life Park Ticket system----------------
----------------------")
        Console.WriteLine("Ticket Type: One Adult: 1day= 20$, 2days= 30$")
        Console.WriteLine("Ticket Type: One Child:  1day= 12$, 2days= 18$")
        Console.WriteLine("Ticket Type: One Senior: 1day= 16$, 2days= 24$")
        Console.WriteLine("Ticket Type: Family:(2 Adults/seniors + 3 Children): 1days =
60$, 2days = 90$")
        Console.WriteLine("Ticket Type: Group ticket per person: 1day = 15$, 2days =
22.5$")
        Console.WriteLine("--------------------------------------------------------------
--------------------------------")

        Dim tickettype() As String = {"OneAdult", "OneChild", "Onesenior", "Family
Ticket", "GroupTicket per person"}
        Dim onedaybooking() As Double = {20, 12, 16, 60, 15}
        Dim twodaybooking() As Double = {30, 18, 24, 90, 22.5}
        Dim numoftickets As Integer
        Dim ticketselected, bookingday, bookingID As Integer
        Dim extraattraction = {"Lionfeed", "Penguinfeed", "Barbecue(only for 2day
ticket)"}
        Dim extraattractioncost = {2.5, 2, 5}

        Dim choice, extrachoice, familygroup As Boolean
        Dim cost, extraselected As Double

        'Task2
        Console.WriteLine("-----------------Welcome to Wild Life Park Ticketing system----
--------------------------------")
        Console.WriteLine("Using information above select ticket catagory and number of
tickets")
        cost = 0

        Console.WriteLine("Enter Ticket Catagory number: 0= OneAdult , 1 = OneChild, 2 =
Onesenior 3 = Family Ticket, 4 = Group ticket")
        ticketselected = Console.ReadLine()
        If ticketselected = 4 Then
            Console.WriteLine("Is this AddressOf family group?{True} for yes and {False)
for No")
            familygroup = Console.ReadLine()
        End If
        Console.WriteLine("Confirm booking for Oneday or Twodays? 1 for 1 days, 2 for two
days")
        bookingday = Console.ReadLine()
        Console.WriteLine("enter number of tickets")
        numoftickets = Console.ReadLine()
        bookingID = bookingID + 1 'BookigID is unique for every booking and works
like Autonumber

        If bookingday = 1 Then
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                cost = numoftickets * onedaybooking(ticketselected)
            ElseIf bookingday = 2 Then
                cost = cost + (numoftickets * twodaybooking(ticketselected))
            End If
        Console.WriteLine("***********Your BookingID for this booking is = " & bookingID
& "***************")
        Console.WriteLine(" Your Total cost of : " & tickettype(ticketselected) & " Num
of tickets: " & numoftickets & " Cost = " & cost)
            Console.WriteLine("Do you want any Extra attraction? True for Yes and False
for No")
            extrachoice = Console.ReadLine()
            If extrachoice = True Then
                Console.WriteLine("select extra choice number: 0 for Lionfeed, 1 for
Penguinfeed, 2 for Barbecue")
                extraselected = Console.ReadLine()
                While extraselected = 2 And bookingday = 1
                    Console.WriteLine("Barbecue is available for TwodayBooking only,
PenguinFeed of LionFeed can be selected for OneDayBooking")
                    extraselected = Console.ReadLine()
                End While
                cost = cost + extraattractioncost(extraselected)
                Console.WriteLine(" Your Total cost of: " & tickettype(ticketselected) &
" Num of tickets: " & numoftickets & " + " & extraattraction(extraselected) & " Cost = "
& cost)
            Else
                Console.WriteLine(" Your Total cost of: " & tickettype(ticketselected) &
" Num of tickets: " & numoftickets & " No attraction selected " & " Cost = " & cost)
            End If
        Console.WriteLine("Ticket Type: " & tickettype(ticketselected) & " , Number =" &
numoftickets & " , Cost =" & cost)

        'Task 3
        Console.WriteLine("******  BEST OFFER ***********")
        Console.WriteLine("If Group is family (2adults+3children) OR (Adults / Seniors)
are more than 5, You can avail BEST OFFER:")
        Dim bestoffer As Double

        If ticketselected = 4 And bookingday = 1 And numoftickets >= 6 And familygroup =
True Then
            bestoffer = (onedaybooking(3) * (numoftickets / 5)) - extraselected 'Offered
family a Family ticket
            Console.Write("Best Offer: =  " & bestoffer)
        ElseIf ticketselected = 4 And bookingday = 2 And numoftickets >= 6 And
familygroup = True Then
            bestoffer = twodaybooking(3) * (numoftickets / 5) - extraselected
            Console.Write("Best Offer: =  " & bestoffer)
        ElseIf ticketselected = 0 And bookingday = 1 And numoftickets >= 6 Then 'if more
than 5 adults in adult ticket, Group tickets ofered
            bestoffer = (onedaybooking(4) * numoftickets) - extraselected
            Console.Write("Best Offer: =  " & bestoffer)
        ElseIf ticketselected = 0 And bookingday = 2 And numoftickets >= 6 Then
            bestoffer = (twodaybooking(4) * numoftickets) - extraselected
            Console.Write("Best Offer: =  " & bestoffer)
        ElseIf ticketselected = 2 And bookingday = 1 And numoftickets >= 6 Then 'if more
than 5 seniors in adult ticket, Group tickets ofered
            bestoffer = (onedaybooking(4) * numoftickets) - extraselected
```

```vb
            Console.Write("Best Offer: =  " & bestoffer)
        ElseIf ticketselected = 2 And bookingday = 2 And numoftickets >= 6 Then 'if more
than 5 seniors in adult ticket, Group tickets ofered
            bestoffer = (twodaybooking(4) * numoftickets) - extraselected
            Console.Write("Best Offer: = " & bestoffer)
        Else
            bestoffer = 0
            Console.WriteLine("No Best offer for this selection catagory, BestOffer= " &
bestoffer)
        End If

        If bestoffer > 0 Then
            Console.WriteLine("Take BEST offer & save = " & cost - bestoffer)
            Console.WriteLine("Best offer = : " & bestoffer & " For Best offer do a NEW
Booking: True for Yes, false for no ")
            choice = Console.ReadLine()
            If choice = True Then
                GoTo 1 'Task 1
            Else
                Console.WriteLine("BestOffer not selected")
            End If
        End If
        Console.WriteLine("Ticket Type: " & tickettype(ticketselected) & " , Number =" &
numoftickets & " , Cost =" & cost)
        Console.ReadKey()
    End Sub
End Module
```