

## Case Study - 6

### Screen 1 - Login

WELCOME TO WAVE COTTAGE--- LOGIN

**WELCOME TO WAVE COTTAGE**

USERNAME

PASSWORD

SIGN IN

FOR NEW USER:-

FIRST NAME:-

LAST NAME:-

ADDRESS:-

PIN CODE:-

COUNTRY/STATE:-

DATE OF BIRTH:-

EMAIL ID:-

PASSWORD:-

CONFIRM PASSWORD:-

SUBMIT CANCEL

Number of inputs= 40

Number of outputs= 1

Number of inquiries= 0

Number of files= 0

Number of external interfaces= 2

## Screen 2 – Online Reservation

The screenshot shows a web browser window titled "WELCOME TO WAVE COTTAGE---ONLINE RESERVATION". The page has a blue border and a light gray background with a dotted pattern. At the top center, there is a logo that reads "WELCOME TO WAVE COTTAGE" in red and blue stylized text. Below the logo, there are several input fields and buttons. The fields are labeled: "HOTEL", "TYPE OF ROOM", "NUMBER OF ROOMS", "NUMBER OF DAYS", "EXPECTED CHECK IN DATE", "EXPECTED CHECK OUT DATE", "PACKAGE/OFFER", and "ADVANCE PAYMENT DUE". The "NUMBER OF ROOMS" and "NUMBER OF DAYS" fields have a dropdown arrow and the number "0" is visible. The "ADVANCE PAYMENT DUE" field has a dropdown arrow and "0 INR" is visible. At the bottom, there are two buttons: "PROCEED TO PAYMENT" and "CANCEL".

Field Label	Input Type	Value
HOTEL	Dropdown	
TYPE OF ROOM	Dropdown	
NUMBER OF ROOMS	Dropdown	0
NUMBER OF DAYS	Dropdown	0
EXPECTED CHECK IN DATE	Dropdown	
EXPECTED CHECK OUT DATE	Dropdown	
PACKAGE/OFFER	Dropdown	
ADVANCE PAYMENT DUE	Dropdown	0 INR

Buttons: PROCEED TO PAYMENT, CANCEL

Number of inputs=  $3+3+4+3+30+30+3= 76$

Number of outputs= 2

Number of inquiries= 0

Number of files= 0

Number of external interfaces= 1

## Screen 3- Online Transaction

WELCOME TO WAVE COTTAGE---ONLINE TRANSACTION

REQUEST FOR THE FOLLOWING DETAILS

HOTEL : WAVE COTTAGE, GOA

TYPE OF ROOM : SUITE

NUMBER OF ROOMS : 1

NUMBER OF DAYS : 2

EXPECTED CHECK IN DATE : 5.04.2012

EXPECTED CHECK OUT DATE : 7.04.2012

ADVANCE PAYMENT DUE : 27000 INR

TRANSACTION DETAILS

TRANSACTION ID : 00000000015011993

TYPE OF CARD : CREDIT CARD

COMPANY : MASTER CARD

CARD NUMBER :

NAME ON CARD :

EXPIRY : MONTH YEAR

CVV :

☐ I agree to the Terms and Conditions...

MAKE PAYMENT CANCEL

Number of inputs=  $3+5+1+1+12+10+1+1=34$

Number of outputs=  $8+1=9$

Number of inquiries= 0

Number of files= 0

Number of external interfaces= 1

## Screen 4 -Check in/Check out

WELCOME TO WAVE COTTAGE-----CHECK-IN-CHECK-OUT

ALREADY HAVE AN ACCOUNT?

ALREADY HAVE A RESERVATION?

If not, Enter the Following details for a new Customer:-

CONFIRMATION NO

NAME

ADDRESS

CITY

PIN CODE

CONTACT NUMBER

CHECK IN DATE  CHECK IN TIME

ROOM TYPE

NUMBER OF ROOMS

NUMBER OF OCCUPANTS

NO OF ADULTS  NO OF CHILDREN

CHECK OUT DATE  CHECK OUT TIME

PACKAGE OFFER

PAYMENT MODE

ADVANCE PAID ☐ YES ☐ NO

**WELCOME TO WAVE COTTAGE**

Number of inputs=  $3+29+2+30+12+3+3+4+3+30+12+3+3+1=138$

Number of outputs=  $1+1+1=3$

Number of inquiries= 1

Number of files= 0

Number of external interfaces= 1

## Screen 5- Embedded System


**WELCOME TO WAVE COTTAGE----EMBEDDED SYSTEM**

ROOM NUMBER:

REQUEST FOR:-

**WELCOME TO WAVE COTTAGE**

**DRINKS AND BEVERAGES :-**


		QUANTITY	QUANTITY
	FRUIT JUICES	Mango <input type="text" value="0"/>	Mango <input type="text" value="0"/>
	ALCOHOLIC	Wine <input type="text" value="0"/>	Wine <input type="text" value="0"/>
	SOFT DRINKS	Cola <input type="text" value="0"/>	Cola <input type="text" value="0"/>
	SHAKES	Vanilla <input type="text" value="0"/>	Vanilla <input type="text" value="0"/>

**FOOD/MEAL**

	SNACKS	Cutlet <input type="text" value="0"/>	Cutlet <input type="text" value="0"/>
	APPETIZERS	Shahi Pan <input type="text" value="0"/>	Shahi Pan <input type="text" value="0"/>
	SWEET DISH	Mousse <input type="text" value="0"/>	Mousse <input type="text" value="0"/>

**ROOM SERVICE :-** Laundry

**LUXURY SERVICES:-** Car



ANY QUERY/SUGGESTION/REQUEST REGARDING ORDER:-

SUBMIT ORDER    MODIFY PREVIOUS ORDER    CANCEL

Number of inputs= 1

Number of outputs= 31+1= 32

Number of inquiries= 1

Number of files= 0

Number of external interfaces= 2



## Screen 6-Administrator functions

WELCOME TO WAVE COTTAGE---ADMINISTRATOR FUNCTIONS

ENTER CONFIRMATION NUMBER OF CUSTOMER : 13091992

FOR MODIFICATION OF CUSTOMER DETAIL OF GIVEN CONFIRMATION NUMBER

NAME :

ADDRESS :

CONTACT NUMBER :

CITY :  PINCODE :

NUMBER OF ROOMS OCCUPIED :  ROOM TYPE :

NUMBER OF OCCUPANTS : NO OF ADULTS :  NO OF CHILDREN :

CHECK IN DATE :  CHECK IN TIME :

CHECK OUT DATE :  CHECK OUT TIME :

PACKAGE OFFER :  ADVANCE PAID : ☐ YES ☐ NO

PAYMENT MODE :

FOR SECURITY AND EDIT PASSWORD

USERNAME : administrator

ENTER CURRENT PASSWORD :

ENTER NEW PASSWORD :

ENTER CONFIRM PASSWORD :

FOR CANCELLATION OF RESERVATION

WANT TO CANCEL RESERVATION?

FOR ANY ROOM RELATED MODIFICATION

ROOM CATEGORY	CURRENT RATE	NEW RATE	TOTAL ROOMS	OCCUPIED
REGULAR	3500 INR	0 INR	30	25
DELUXE	5000 INR	0 INR	40	39
KING SIZE	10000 INR	0 INR	20	5
SUITE	20000 INR	0 INR	10	6

FOR BLOCKING AND UNBLOCKING ROOM

PURPOSE :  REASON FOR B/UB :

ENTER ROOM NUMBER : 101

FOR FOOD RELATED MODIFICATION

MEAL TYPE :

MEAL ITEM :

CURRENT PRICE : 0 INR

WANT TO CHANGE RATE? NEW PRICE : 0 INR

WANT TO CREATE NEW ITEM?

MEAL TYPE :

ENTER NEW MEAL ITEM :

PRICE : 0 INR

WANT TO DELETE ANY ITEM?

ENTER MEAL ITEM :

Number of inputs= 30+3+3+30+12+30+12+3+3+1+3+10+3+10=153

Number of outputs= 1+2+19+4+2+1+1+1+1+1= 33

Number of inquiries= 1+1= 2

Number of files= 0

Number of external interfaces= 1+1+1+1+1+1= 6

## Screen 7 – Bill generation

WELCOME TO WAVE COTTAGE----BILL GENERATION

Bill number: 130915019293

Customer ID: 123456789

Customer Name: ABC

Check in Date: 12-03-2012

Check out date: 15-03-2012

Total Bill = Basic Room Charge+Additional Charge+Embedded System Services Charge+ Taxes

= 6500+1000+1500+550

= 9550 INR

Payment Mode: CREDIT CARD

THANK YOU FOR YOUR VISIT HERE!!! COME AGAIN!!!! :D

WAVE COTTAGE IS HAPPY TO SERVE YOU....

Number of inputs= 0

Number of outputs= 9

Number of inquiries= 0

Number of files= 0

Number of external interfaces= 0

**Calculate the following for the above screens:**

**1. Function points**

**For Screen 1:**  $FP = \text{Total count} \times [0.65 + 0.01 \times \sum Fi]$

$$\text{Total count} = 40 \times 3 + 1 \times 4 + 2 \times 5 = 134$$

$$\sum Fi = 3 + 2 + 0 + 1 + 4 + 3 + 0 + 0 + 0 + 0 + 4 + 0 + 4 + 4 = 25$$

$$FP = 134 \times [0.65 + 0.01 \times 25] = 134 \times 0.9 = 120.6$$

**For Screen 2:**  $FP = \text{Total count} \times [0.65 + 0.01 \times \sum Fi]$

$$\text{Total count} = 76 \times 3 + 2 \times 4 + 1 \times 5 = 241$$

$$\sum Fi = 3 + 4 + 2 + 3 + 2 + 1 + 4 + 3 + 4 = 26$$

$$FP = 241 \times [0.65 + 0.01 \times 26] = 241 \times 0.91 = 219.31$$

**For Screen 3:**  $FP = \text{Total count} \times [0.65 + 0.01 \times \sum Fi]$  Total

$$\text{count} = 24 \times 3 + 9 \times 4 + 1 \times 5 = 113 \quad \sum Fi =$$

$$4 + 4 + 2 + 1 + 3 + 4 + 2 + 3 + 2 + 1 + 3 + 2 + 4 = 35 \quad FP = 113 \times [0.65 + 0.01 \times 35] = 113 \times 1 = 113$$

**For Screen 4:**  $FP = \text{Total count} \times [0.65 + 0.01 \times \sum Fi]$  Total count =

$$138 \times 3 + 3 \times 4 + 1 \times 3 + 1 \times 5 = 434$$

$$\sum Fi = 4 + 3 + 2 + 1 + 3 + 3 + 1 + 3 + 1 + 3 + 1 + 3 + 4 + 3 = 35 \quad FP = 434 \times [0.65 + 0.01 \times 35] = 434$$

**For Screen 5:**  $FP = \text{Total count} \times [0.65 + 0.01 \times \sum Fi]$

$$\text{Total count} = 1 \times 3 + 32 \times 4 + 1 \times 3 + 2 \times 5 = 144$$

$$\sum Fi = 3 + 4 + 1 + 3 + 2 + 2 + 3 + 3 + 4 = 25$$

$$FP = 144 \times [0.65 + 0.01 \times 25] = 144 \times 0.9 = 129.6$$



**For Screen 6:**  $FP = \text{Total count} \times [0.65 + 0.01 \times \sum Fi]$  Total

count =  $153 \times 3 + 33 \times 4 + 2 \times 3 + 5 \times 5 = 622$   $\sum Fi =$

$4+4+2+3+2+3+2+3+2+3+3+2+2+3 = 38$

$FP = 622 \times [0.65 + 0.01 \times 38] = 622 \times 1.03 = 640.66$

**For Screen 7:**  $FP = \text{Total count} \times [0.65 + 0.01 \times \sum Fi]$

Total count =  $9 \times 4 = 36$

$\sum Fi = 3+4+2+3+4+3+2+2+3+3+2+4 = 35$   $FP = 36 \times$

$[0.65 + 0.01 \times 35] = 36$

## 2. Object points

**For Screen 1:** Object points = (weight\*screens) + (weight\*reports)

=  $1 \times 5 + 2 \times 2 = 9$

**For Screen 2:** Object points = (weight\*screens) + (weight\*reports)

=  $1 \times 3 + 2 \times 1 = 5$

**For Screen 3:** Object points = (weight\*screens) + (weight\*reports)

=  $1 \times 3 + 2 \times 1 = 5$

**For Screen 4:** Object points = (weight\*screens) + (weight\*reports)

=  $1 \times 6 + 2 \times 4 = 14$

**For Screen 5:** Object points = (weight\*screens) + (weight\*reports)

=  $1 \times 4 + 2 \times 2 = 8$

**For Screen 6:** Object points = (weight\*screens) + (weight\*reports)

=  $1 \times 7 + 2 \times 4 = 15$

**For Screen 7:** Object points = (weight\*screens) + (weight\*reports) =  $1 \times 0 +$

$2 \times 1 = 2$

### **3. Effort**

$$\text{NOP} = (\text{Object points}) \times [(100 - \text{reuse})/100]$$

$$\text{PROD} = 13$$

$$\text{Effort} = \text{NOP}/\text{PROD} = (\text{Object points})/13$$

**For Screen 1:** Effort =  $9/13 = 0.69$  person-month

**For Screen 2:** Effort =  $6/13 = 0.46$  person-month

**For Screen 3:** Effort =  $6/13 = 0.46$  person-month

**For Screen 4:** Effort =  $14/13 = 1.07$  person-month

**For Screen 5:** Effort =  $8/13 = 0.61$  person-month

**For Screen 6:** Effort =  $15/13 = 1.15$  person-month

**For Screen 7:** Effort =  $2/13 = 0.15$  person-month