Template App

Backend + Frontend

for Development and for Training

Responsive Components:

1. Layout with Menu etc. in header
2. Layout with footer panel
3. Form in the content panel (mid section)
   a. Header buttons panel
   b. Attribute-values by row. 1 to 2 pairs per row.
   c. Attribute-values by column. 1 to 10 pairs per row.
   d. Tabs for multi-panels
   e. Tables
      i. In-cell editing
         1. List of value button
         2. Dropdown button
         3. Checkbox cell
         4. Non-editable cells
      ii. [Delete], [Edit], [Insert Above] buttons in each editable row
      iii. Freeze some columns option, Freeze header row option

Goal 2. List view in addition to form view.

Table Features for List View:

- Filter column. Unfilter.

- Sort Increasing, Decreasing, Undo Sort.

- Search column.

- Text search in all columns

- Show pages in footer and left/right buttons

- Select a Row.

Components needed for both web + mobile responsive design

1. Layout Screen Panels 1) frozen top-section panel for program name, logo, menu, & user info 2) mid-section panel area for form 3) frozen footer-section panel for some other display information.

Layout Responsive Components

Home / List / App

Content

Ant Design ©2018 Created by Ant UED

Menu Responsive Components

2. Menu Component. See https://codesandbox.io/s/3uj5r7, but make it top panel instead of the left panel.
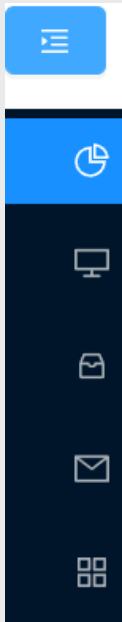
Expanded mode with multi-levels:

Icon mode:
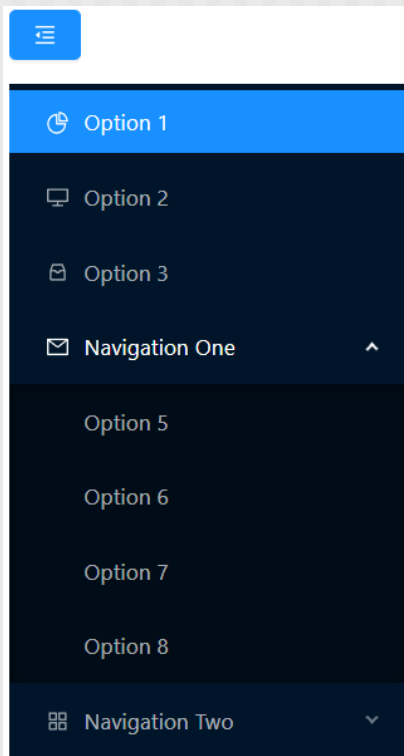
But let's try to put the menu at top panel, not left:

Form Responsive Components

3. Form Component. The form will generally be in the content panel. It will have 1) header panel area for button icons, form name, status information (active, cancelled, …), last saved by, etc. 2) content panel for data entry with possibility of many tabs and sub-panels. It would be nice if the header section of the form is frozen.

attribute-value pairs in row format

attribute-value pairs in column format

Form Responsive Components

3. Form Component. See https://codesandbox.io/s/jdmlxc, but allow multiple attribute-value pairs:

Date / Time related pickers
https://codesandbox.io/s/peo7s4:

Responsive multiple attribute-value pairs. https://codesandbox.io/s/2etbn3:

Product	Cloud Database	Billing	Prepaid	time	18:00:00
Amount	$80.00	Discount	$20.00	Official	$60.00
Config Info	Data disk type: MongoDB Database version: 3.4 Package: dds.mongo.mid Storage space: 10 GB Replication factor: 3 Region: East China 1				

Product	Cloud Database
Billing	Prepaid
time	18:00:00
Amount	$80.00
Discount	$20.00
Official	$60.00
Config Info	Data disk type: MongoDB Database version: 3.4 Package: dds.mongo.mid Storage space: 10 GB

Form Responsive Components

3. Form Component. Showing one-to-one attribute-value pairs in column format.

In column format:
(4 attributes per row)

*Truck Bin Load	*Tare Weight	*Net Weight	*Gross Weight
Double ▼	2.00	36.00	38.00

In row format:
(2 per row)

*Truck Size :	D30	*Size Description :	รถพ่วง 30 คัน

The **Descriptions Responsive Component** with Column format.   https://codesandbox.io/s/lv0978?file=/index.js

Product	Billing Mode	Automatic Renewal
Cloud Database	Prepaid	YES
Order time	Usage Time	
2018-04-24 18:00:00	2019-04-24 18:00:00	
Status		
• Running		
Negotiated Amount	Discount	Official Receipts
$80.00	$20.00	$60.00
Config Info		
Data disk type: MongoDB Database version: 3.4 Package: dds.mongo.mid Storage space: 10 GB Replication factor: 3 Region: East China 1		

User Info	
Product	Billing Mode
Cloud Database	Prepaid
Automatic Renewal	Order time
YES	2018-04-24 18:00:00
Usage Time	
2019-04-24 18:00:00	
Status	
• Running	
Negotiated Amount	Discount
$80.00	$20.00
Official Receipts	Config Info
$60.00	Data disk type: MongoDB Database version: 3.4 Package: dds.mongo.mid

4. Table Component for data entry/view forms. First 2 and last columns are frozen https://codesandbox.io/s/h4g81m:

Full Name	Age	Column 1	Column 2	Column 3	Action
Edrward 0	32	London Park no. 0	London Park no. 0	London Park	action
Edrward 1	32	London Park no. 1	London Park no. 1	London Park	action
Edrward 2	32	London Park no. 2	London Park no. 2	London Park	action
Edrward 3	32	London Park no. 3	London Park no. 3	London Park	action
Edrward 4	32	London Park no. 4	London Park no. 4	London Park	action

Full Name	Age	Column 2	Column 3	Column 4	Action
Edrward 0	32	ndon Park no. 0	London Park no. 0	London Park no. 0	action
Edrward 1	32	ndon Park no. 1	London Park no. 1	London Park no. 1	action
Edrward 2	32	ndon Park no. 2	London Park no. 2	London Park no. 2	action
Edrward 3	32	ndon Park no. 3	London Park no. 3	London Park no. 3	action
Edrward 4	32	ndon Park no. 4	London Park no. 4	London Park no. 4	action

Allow incell editing per line
https://codesandbox.io/s/02ngi9:

Should allow in each cell: list of value button, drop down, checkbox (or switch on/off), date/time/month picker.

Should be able to freeze header row, and select columns. https://codesandbox.io/s/suqmig

name	age	address	operation
Edrward 0	32	London Park no. 0	Edit
Edrward 1	[ ] Please Input age!	London Park no. 1	Save Cancel
Edrward 2	32	London Park no. 2	Edit

10

Table Responsive Components

4. Table Component for list view forms. Filter, sort, and search capabilities on each table column.

https://codesandbox.io/s/ew5d6w (filter, sort).

https://codesandbox.io/s/8ydl3g (search):

Table Responsive Components

4. Table Component. How to make Ant design tables responsive?

https://stackoverflow.com/questions/65508782/how-to-make-ant-design-table-responsive

Example of responsive grids: https://www.w3docs.com/tools/code-editor/5165

Tab Responsive Components

5. Tab Component. https://codesandbox.io/s/c80hcd

Tab Title 1	Tab Title 2	Tab Title 3

Content of Tab Pane 2

Content of Tab Pane 2

Content of Tab Pane 2

Icon Components

5. Icon Component. https://codesandbox.io/s/71kjvh

Used for form buttons at the top panel of each form.

Standard UI for each data entry form

We should create one example app
and then use it for training.

Leading '*'means a required field. Shaded means auto-filled or calculated field (never has '*').

The Invoice Form

Date Picker Button

When change in unit price or quantity, the extended price should be calculated and all totals should be updated.

List of Value (LoV) button - shows LoV Form to choose a foreign key.

Insert Row will insert a new row above the currently active row
Delete Row will remove current row. All "#" should be renumbered.
New Row will insert a new row at the last row

The Invoice Form and Data

InvoiceLineItem

InvoiceNo	ProductCode	UnitPrice	Quantity	ExtendedPrice
INV100/13	C100	฿30.00	฿10.00	฿300.00
INV100/13	P101	฿20.00	฿5.00	฿100.00
INV101/13	D200	฿120.00	฿1.00	฿120.00
INV101/13	E233	฿10.00	฿10.00	฿100.00
INV101/13	P101	฿20.00	฿4.00	฿80.00
INV102/13	D200	฿120.00	฿1.00	฿120.00
INV102/13	E233	฿10.00	฿10.00	฿100.00
INV102/13	P101	฿20.00	฿4.00	฿80.00

Home

Invoice Form

NEW   EDIT

*Invoice No.: INV100/13   *Invoice Date: 22/8/2013

*Customer: A   ABC Co., Ltd.

Products Sold: Insert Row   Delete Row   New Row

#	*Product Code	Name	*Unit Price	*Quantity	Extended Price
1	C100	Chalk	30.00	10	300.00
2	P101	Faber Pencil B2	20.00	5	100.00

Total Price:	400.00
VAT:	28.00
Amount Due:	428.00

Invoice

InvoiceNo	InvoiceDate	CustomerCode	TotalAmount	VAT	AmountDue
INV100/13	22-Aug-13	A	฿400.00	฿28.00	฿428.00
INV101/13	25-Oct-13	B	฿300.00	฿21.00	฿321.00
INV102/13	07-Oct-13	A	฿300.00	฿21.00	฿321.00

The Product Form and Data

Product Form

| NEW | EDIT | COPY | SAVE | DELETE | PRINT | CLOSE |

*Product Code: P100   *Name: Parker Pen #113
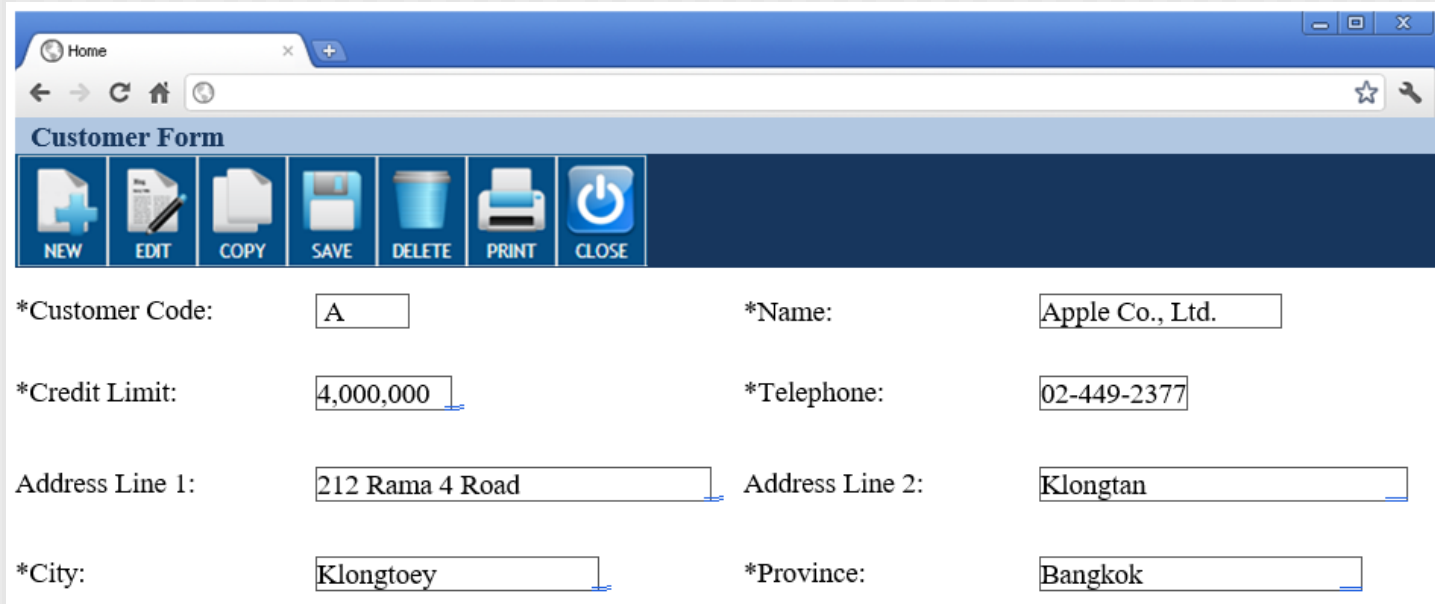
*Unit Price: 400.00   *Units: PCS

Sample Data in Products Table:

ProductCode	ProductName	UnitPrice	Units
C100	Chalk	฿30.00	PCS
D200	Double-A, A4 Paper	฿120.00	PACK
E233	Eraser	฿10.00	PCS
P100	Parker Pen#113	฿400.00	PCS
P101	Faber Pencil B2	฿20.00	PCS

18

The Customer Form and Data
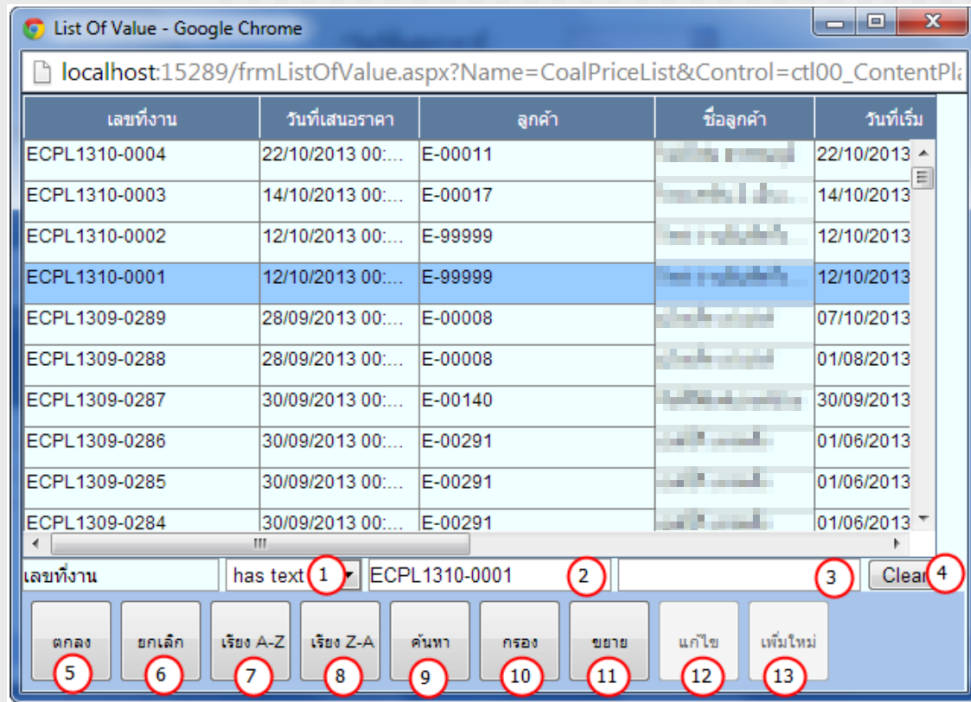
Customer Form

| NEW | EDIT | COPY | SAVE | DELETE | PRINT | CLOSE |

*Customer Code: [A]   *Name: [Apple Co., Ltd.]

*Credit Limit: [4,000,000]   *Telephone: [02-449-2377]

Address Line 1: [212 Rama 4 Road]   Address Line 2: [Klongtan]

*City: [Klongtoey]   *Province: [Bangkok]

Customer

Code	CustomerName	CreditLimit	Telephone	AddressLine1	AddressLine2	City	Province
A	Apple Co., Ltd.	$4,000,000.00	02-449-2377	212 Rama 4 Road	Klongtan	Klongtoey	Bangkok
B	Bell Co., Ltd.	$1,000,000.00	02-243-5592	51 Charan Sanit 1	Thapra	Bangkok Yai	Bangok
C	CAT Co., Ltd.	$2,000,000.00	02-522-4400	57 Suksawad 17	Bangmod	Tungkru	Bangkok

The List of Value Form "LoV", "List View"

1. Operation : คือเงื่อนไขสำหรับการปรียบเทียบข้อมูลที่ต้องการค้นหาภายในนี้ มีคำสั่งให้เลือกดังต่อไปนี้ has text, =, >, >=, <, <=, between (ช่วงระหว่าง)

2. Text Search 1 : สำหรับป้อนข้อความหรือตัวเลขที่ต้องการค้นหา ตามเงื่อนไขคำสั่งตามที่เราเลือกในข้อที่ 1

3. Text Search 2 : สำหรับป้อนข้อความที่ 2 ใช้สำหรับการใช้คำสั่งเงื่อนไข between

4. ปุ่ม Clear : สำหรับเคลียร์ข้อมูล Operation, Text Search 1, Text Search 2 ให้เป็นค่าเริ่มต้น

5. ปุ่ม Ok : สำหรับยืนยันข้อมูลที่เราได้เลือกไว้ (แถวที่เป็นแถบสีฟ้าเข้ม)

6. ปุ่ม Cancel : สำหรับยกเลิกการเลือกข้อมูล หรือปิด List of value

7. ปุ่ม Ascending : สำหรับเรียงลำดับข้อมูลจากน้อยไปหามาก

8. ปุ่ม Descending : สำหรับเรียงลำดับข้อมูลจากมากไปหาน้อย

9. ปุ่ม Find : สำหรับค้นหาข้อมูลลำดับต่อไป ตามเงื่อนไขที่ได้ระบุไว้ใน Operation, Text Search 1 และ Text Search 2

10. ปุ่ม Filter : สำหรับกรองข้อมูลตามเงื่อนไขที่ได้ระบุไว้ใน Operation, Text Search 1 และ Text Search 2

Date Picker Form

We will also need: Month Picker, Time Picker.

Color Scheme:

Let's use a color scheme in-line with 3BB:

- Deep Orange
- Navy Blue
- Black
- White
- Very light orange background
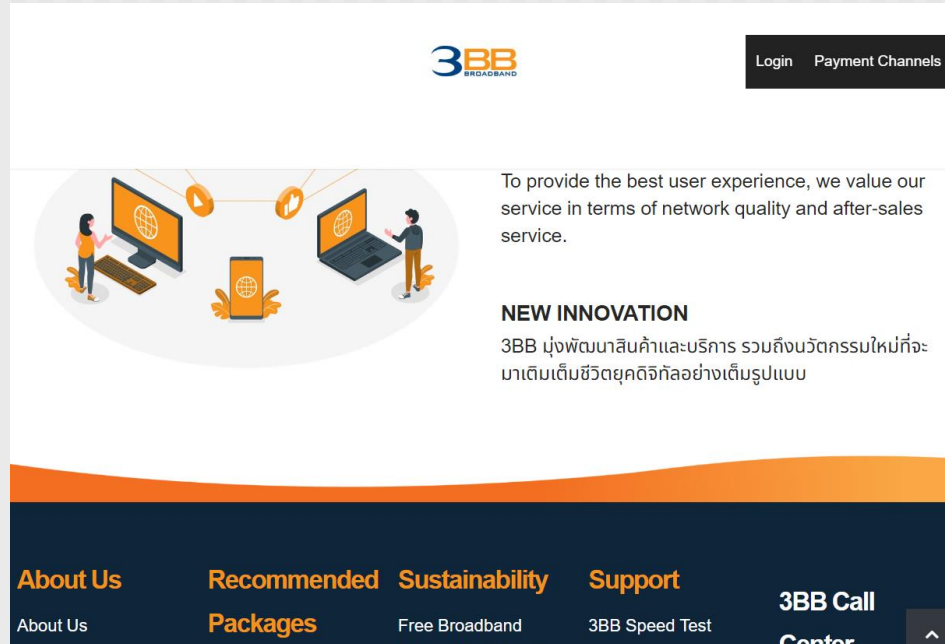
Font

Let's find a good Font Name to use for Thai text and for English text.

Ab

Noto Sans

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789

Light   Regular   Medium   **Bold**
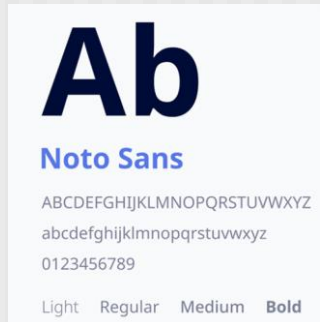
Icons - let's design all the icons needed for our color scheme
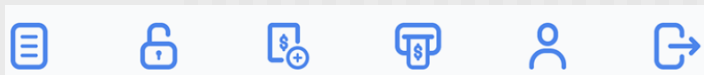
mid-size form top icons for: [clear][edit][copy][save][delete][print][close]

small line item icons for: [insert]   [delete][edit]   [save][cancel]

mid-size line item icon for: [add row]

Small List of Value Button: Date Selection Button:
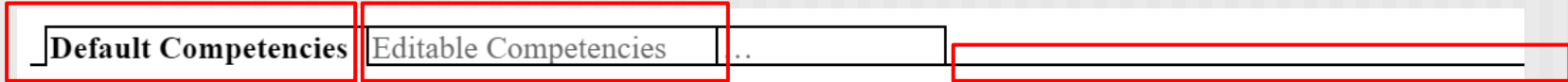
Message icon buttons for: [OK/Yes][Cancel/No]

*Font คือ font name, color, size, style.

Header Panel Textbox - *Font, bg. color. for 1) editable , 2) non-editable fields.

Left Panel (Menu tree and feedback display) - bg. color

Top Panel (links and feedback display) - *Font, bg. color.

Top Form Panel for Form Name - *Font, bg. color., border color.

Top Level Menu *Font

Form Top Buttons Panel - bg. color.

Form Background Area - bg. color, border color.

Header Panel Label - *Font, bg. color. for 1) required 2) not-required fields.

Table Panel Label - *Font, bg. color for 1) required 2) not-required fields.

Child Level Menu *Font

Main Background Area - color

Table Panel Textbox - *Font, bg. color. for 1) editable 2) non-editable fields.

For each panel/textbox/ drawing we have to define these, where applicable:
- Background: Fill Color, border thickness, border color
- Foreground: Font name, font size, font style (reg., bold, ...), font color

We have to specify this for our in-form panels such as Tabs as well. This means for tab captions and tab borders (active/non-active tabs).

Default Competencies | Editable Competencies | ..

[1]:
Competencies List (only Level 1 of the tree is allowed for [1]):

Number	*Competency Code	Competency Name	*Aggregate Score Weight %	Score Type	Can Remove?	Can Change Weight?
1	🔍		20	Star 0-5	☑	☑
2	🔍		20	Star 0-5	☑	☑

After training on Invoice App, try: Registration App

Course Registration Form

NEW | EDIT | COPY | SAVE | DELETE | PRINT | CLOSE

*Registration No.: 1000   *Registration Date: 22/8/2013
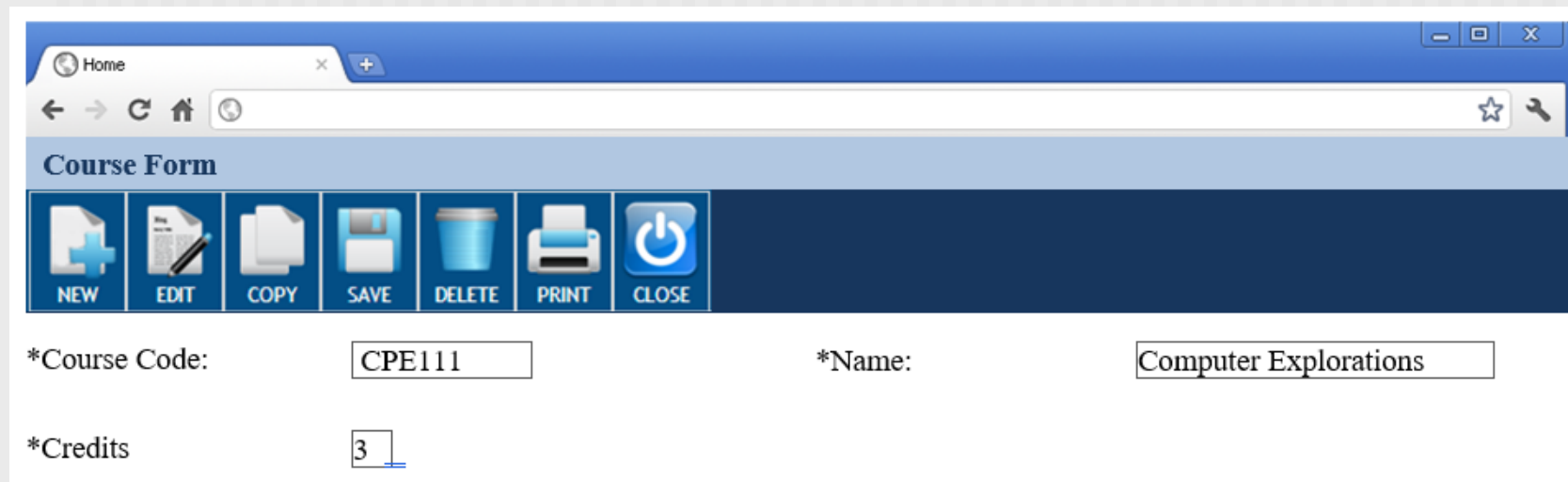
*Student: 54001 Suthep Madarasmi   *For semester: 1/2556

Courses Registered:

#	*Course Code	Name	Section No.	Credits
1	CPE100	Introduction to Programming	2	3
2	CPE111	Computer Explorations	2	3
3	MTH111	Calculus 1	5	3
4	PHY100	Physics 1	1	3
			Total Credits:	12

Course Form

Semester Form

Student Form

API security

1. Identity and access management. This ensures that all applications, servers, and users that consume your API are those with the proper permissions to do so. The two main means of identity and access management are authentication and authorization.

2. Content integrity and confidentiality. Integrity ensures that the message was not compromised after transmission. Content or message confidentiality ensures that the message received is verified and that the journey from sender to API has not been witnessed by others.

3. API reliability and availability. Always available and not blocked or down.
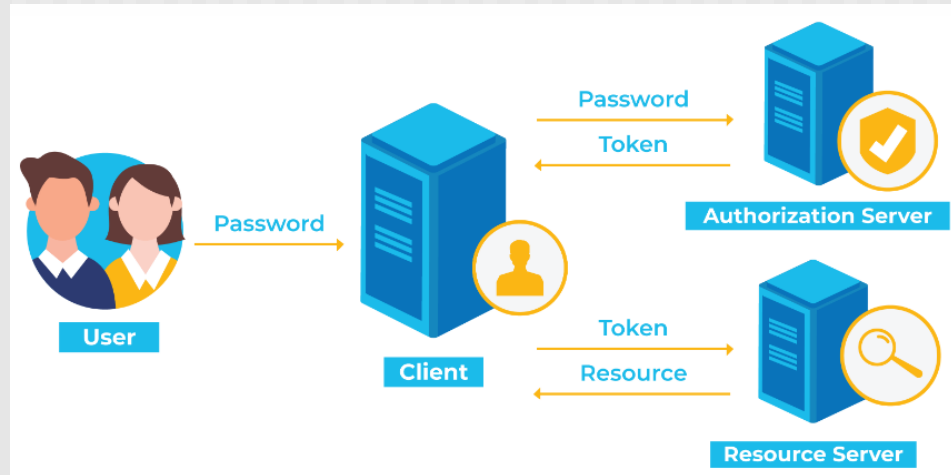
Tokens

1. Hardware Token

2. Software component token such as:

   a. JSON Web Tokens (JWT)

   b. OTP

   c. API Token (OAuth2)

The JSON Web Token (JWT) Auth Token

JWTs have three important components:

1. Header: Define token type and the signing algorithm involved in this space.

2. Payload: Define the token issuer, the expiration of the token, and more in this section.

3. Signature: Verify that the message hasn't changed in transit with a secure signature.