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| Computing Studies - Information Processing Technology |
| Information Systems for Broken Hill Surf Shop  Ryan Oo, Andrew Wong, 9IPT1  June, 2014 |

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# Broken Hill Surf Shop

Broken Hill Surf Shop is jointly owned by Ryan Oo and Andrew Wong. Our shop is located at 10, Mica Street, Broken Hill, 2880, NSW. We have just bought the shop and have fully refurbished it to be our head office which can sit up to 10 employees and also have a small warehouse in the back.

We plan for most of our business to be from our online store called ‘Broken Hill Surf Shop’ and expect orders from the east and west coast cities of Australia, and some international business.

Our vision for this business is “ highest quality surf equipment at the best price! “. This means that our customers will have surf equipment that they can use for happily many years whilst being affordable.

Look for our exciting website with this logo.

# Project Plan

To make sure that we cover all the key parts of analyzing, designing and building our Information

|  |  |  |
| --- | --- | --- |
| Activities | Ryan Oo | Andrew Wong |
| Logo development | Review, suggest improvements | To develop logo |
| Project Plan | We meet after most IPT lessons or after school classes to discuss what work needs to be done and who would ‘develop’ that and who would ‘review’. We meet often so that we can check our progress and also to make changes to our work and discuss if we can improve something. We exchange ideas and workusing Skype and GitHub(project management) and emails. | |
| Business requirements | To develop requirement | To review and suggest changes |
| Systems requirements | To develop requirement | To review and suggest changes |
| Website design | To design website | To review and suggest changes |
| HTML coding | To review and suggest changes | To do HTML coding |
| HTML code explanation | To review and suggest changes | To explain HTML code |
| BHSS Business Functions | To develop functions | To review and make suggestions |
| Database (flat file) | To develop BHSS business data | To input into Access database business data |
| Advertisement | To review and suggest changes | To do advertisement |
| Information System Context diagram | To develop Information System Context diagram | To review and suggest changes |
| Assignment report | Jointly develop sections and review other sections | Jointly develop sections and review other sections |

# Business Requirement

This section of our report has the details of how our business will need to work including our online website and our Information Technology systems. This is our requirements chapter for:

* Our whole business
* Our website
* To manage our products
* For our Information Technology

## Business Requirements

These requirements cover all aspects of our online and single shop business at Broken Hill.

* Shop hours. Our shop at 10 Mica Street, Broken Hill will be open:
  + From 8am-6pm Monday to Friday
  + On Thursday, we will close at 8pm
  + On Saturdays and Sundays we are closed.
* Online website.
  + Our website will be available 365 days
  + And will be operating 7 x 24 hours everyday
  + From time to time, we will need to update our website and will provide notification on our website when it will be unavailable and when it will be available
  + Our website is very secure and uses 128bit secure encryption of every transaction and payment
* Managing products.
  + Must be able to handle up to 50 surfing products
  + Be able to allow product quantity to be added/subtracted as appropriate and for the available balance to be displayed to customer and internal staff
  + Be able to set and show any discounts applicable to the product
  + Be able to set and show the suppliers of that product
  + Able to capture:
    - Stock code/Product ID
    - Barcode
    - Item name
    - Cost price
    - Sale price
    - Supplier ID
    - and discount %
  + Able to set a minimum stock number to alert when low stock
* Managing customers.
  + Be able to capture and update customer details
  + These details at a minimum are:
    - Customer ID
    - Last name
    - First name
    - Address including postcode, state and country
    - Contact details – phone, email
    - Loyalty customer flag
    - Customer logon ID and encrypted password
* Managing suppliers.
  + Be able to capture and update supplier details
  + These details at a minimum are:
    - Supplier ID
    - Supplier name
    - Address including postcode, state and country
    - Contact details – phone, email
* Managing staff.
  + Be able to capture and update employee details
  + These details at a minimum are:
    - Employee ID
    - Last name
    - First name
    - Roles allowed are:
      * Administrator (x2)
      * Sales consultant (x2)
      * Help Desk
      * Warehouse manager
      * Accountant
      * IT Support
    - Address including postcode, state and country
    - Contact details – phone, email
    - When employed
    - Salary
    - Staff logon ID and encrypted password
* Payment methods accepted.
  + Shop.
    - Cash
    - Master card
    - Visa card
    - Cheque (up to $100)
  + Online.
    - Master card
    - Visa card
    - American Express
    - BPAY
    - Paypal (function to be provided later)

## Website requirements

As we expect most of our business to be from our online store, it is important that our website can:

* Be easy for a customer to use
* 3 clicks to select, buy and pay
* Be available public holidays and weekends too
* Have a main online store webpage
* Able to navigate to Product and Payment pages
* Allow customer to check for availability of products
* Notify customers of specials and discounts
* Capture payment details
* Able to record customer details for delivering orders.
* Able to add items to a cart for customers and to add up the total purchase price including discounts
* Able to accept credit card payments from customers.
* Allow customers to select pickup or delivery options.
* Clearly show delivery charges ($5 for Australia wide, within 2 days) and ($20 for overseas, within 2 weeks) delivery
* When a product is purchased, the next page must :
  + Provide a description of the product
  + Provide the sale price (with any discount applied)
  + Display the stock code
  + Display barcode
  + Display available quantity
  + A “BUY” button
* On selecting the “BUY” button, the next page must :
  + Show total item price
  + Add delivery price
  + Show full price of purchase(s) including delivery charges
  + Record credit card name on the card (for AMEX, Mastercard, VISA only)
  + Record credit card number
  + Record credit card expiry date
  + Record CSV number
  + Provide a RECEIPT number when the payment is approved
* Allow customers to set themselves up as loyalty customers with a logon id and password
* Allow staff to change products and prices
* Able to add new products and suppliers
* Able to process payments to suppliers
* Able to process employee and salaries
* A future requirement is to be able to record points so that for every 1,000 points, the next customer purchase will have 20% of the sale price.
* Must have a link to the full product list database

## Sale Ticket

Create a sale ticket for each product with:

* Stock code
* Barcode
* Item name
* Sale Price
* Discount (if any)

## Systems Requirements

The Broken Hill Surf Shop Information Technology system must:

* Be able to support 8-10 employees Monday-Friday and one help desk user on weekends
* Support for 8-10 user computers connected through a LAN
* Be able to support up to 20 customers shopping online daily
* Provide these office software:
  + Word processing for invoicing and other communications with customer, employees and suppliers
  + Access for database management
  + Email for office, supplier and customer messages
  + Powerpoint for marketing and advertisement work
* Be able to work on Windows 8 operating system
* 1 high speed printer (100 ppm) for sales and online orders
* 1 high speed printer (200 ppm) and scanner for reporting and business use
* Have a hard disk drive for daily backups of all customer orders, supplier invoices, inventory, sales data , financial data and reports. Keep for 7 years. This hard disk to keep at another location for safety.
* Have 2 x high capacity USB for hourly and daily backups of all customer orders, supplier invoices and financial data for the last 2 months.

# Information System Design

## Broken Hill Surf Shop – Information Systems in Context Diagram



### Environment

The environment of the Broken Hill Surf Shop computer system includes:

1. The supplier
2. The electrical power needed to power the system
3. The communications such as the telephone the salesperson uses and email so the business can take orders

### Users

The users of this computer system include:

1. Warehouse staff and manager – The person who organises the shipment/delivery of the new stock from the supplier. The Warehouse Manager is a user as he/she views and makes use of the information output from the Information System
2. The Supplier – As the supplier needs to know what to supply. The supplier also makes use of the information output from the Information System such as product orders.
3. Customer – As they make use of the information output from the system, such as a copy of their order (invoice)

### Purpose

The purpose of the Broken Hill Surf Shop computer system is to manage the day-to-day business transactions. The Broken Hill Surf Shop computer system also lessens the tasks that Office and Warehouse Staff have to do, by automatically updating price and stock quantity information if the supplier changes their price and by making it easier to update how much stock is available in the inventory.

### Participants

The participants in this system are:

1. Michael Long – The manager
2. Office Staff such as:
   1. Accounting staff – Who manage the accounting (daily reports, weekly reports, end-of-month reports)
   2. Salesperson/s – Who put orders into the computer system
3. Government – The government office that Broken Hill Surf Shop has to pay tax to
4. Warehouse Staff – Who manage the stocks, take deliveries, dispatch orders and input the stock details into the computer system
5. IT Support staff such as systems administrators who add/remove staff accounts and passwords

### Data/Information

The data/information in this computer system includes:

1. The product information such as the price, product code and stock available for the product
2. The invoices printed out for the customer
3. The customer’s details such as address, email address, contact number
4. Supplier’s details such as address, ABN number
5. Accounts receivable – Debtor (customers who owe Broken Hill Surf shop monies)
6. Accounts payable – Creditor (suppliers and other companies that Broken Hill Surf Shop owe monies to)

### Information Technology

The information technology in this system includes:

1. The Celeron-based microcomputer with 1.2GHz and 512MB RAM – The CPU
2. The 12 terminals attached to the Celeron-based microcomputer
3. The computer screens
4. The 30 GB hard disk drive
5. The USB 2.0 drive
6. The 2GB tape cartridge unit
7. The computer’s operating system – UNICORN
8. The business application the computer system uses – HANG-TEN
9. Dot Matrix Printer
10. HP 21000 TN laser printer
11. Mouse
12. Keyboard
13. Network cables
14. Modem

### Boundary

The boundaries of the Broken Hill Surf Shop include:

1. Supplier information system
2. Customers internet

## Broken Hill Surf Shop – System Functions

## Broken hill surf shop – Hardware and Network Design

## Website Design

## BHSS Webpage – Main

## BHSS Webpage – Product Summary

## BHSS Webpage – Product Details

## Ticketing

## Database Design (Flat file)

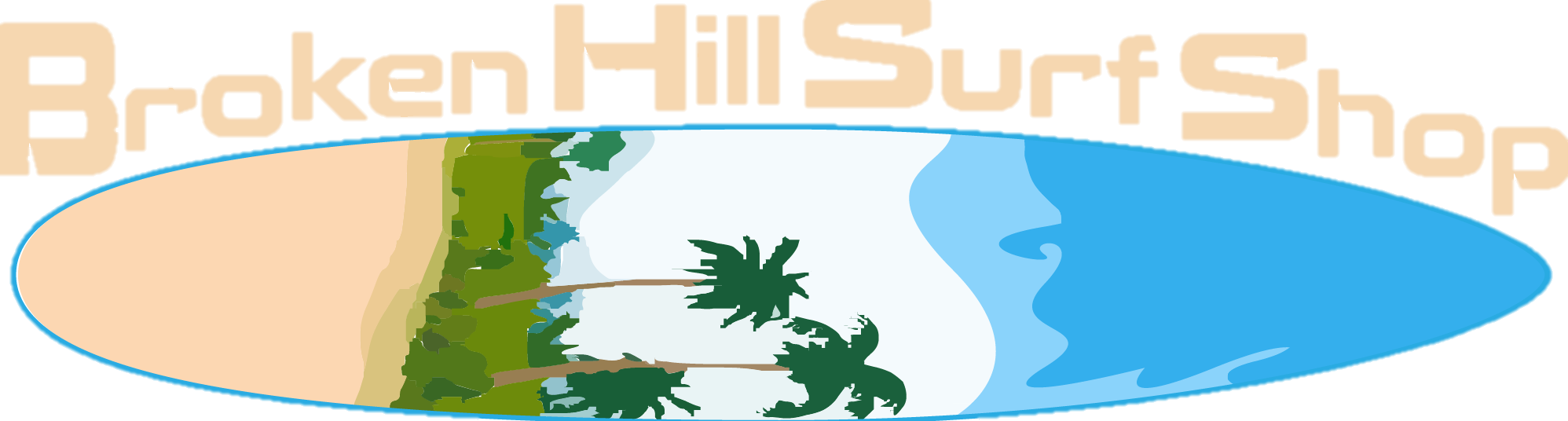
## Warehouse Control

## User Access

# Other Design Items

## Broken Hill Surf Shop – Logo

## Broken Hill Surf Shop – Advertisement

To all the surfers in Australia and the world! If you want the best quality surfing gear at the best price ever, login to Broken Hill Surf Shop website at [www.bhsurfing.com.au](http://www.bhsurfing.com.au) for the best deal. We guarantee our products for 5 years and will replace any surfing gear that you are not happy with. If you choose to be a loyalty customer, we will accumulate points on your every purchase which go towards a discount on your next purchase. If you happen to visit Broken Hill and our shop, you will get a further 10% discount just from coming into our shop.

## Broken Hill Surf Shop – Customer Invoice



## Supplier File

# Bibliography

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