**NCERT Class 6 (Helper)**

**QuSwense**

This Document is a blueprint of the idea of creating a helper application for students to be used as an add-on to the books published by NCERT (National Council of Educational Research and Training). QuSwense acknowledges the fact that all the subjects and the chapters replicate the structure introduced by NCERT. Some of the data and text might also replicate the NCERT book. The application is intended to be used a self-tutorial with animated and automated questions and answers. The application intends not to have any detail about the subjects and the chapter which is already covered in NCERT books. It intends to help the student to understand and play around the concepts as mentioned in the books.

Contents

1. **Screen Layouts**
2. **Screen 1**

Display the Animated Logo of QuSwense with Text “QuSwense”. Display the Text below the Logo “NCERT Helper for Class 6”. For 3 seconds

1. **Screen 2**

Display the Subjects in a list view with icons:

* Mathematics
* Science
* English
* Social Studies
* Sanskrit
* Hindi

1. **Screen 3 – After selecting an item in screen 2**

Display the topics under the subjects as per NCERT

1. **Screen 4 – After selecting an item in screen 3**

Display the List of subtopics under the topics

Tab Bar Menu items:

* Homepage – dashboard
* Profile – Student (and parents)
* Progress Statistics
* Bookmarks
* Notifications

1. **Mathematics**
   1. **Knowing our Numbers (Subtopic**: Compare Numbers)

**Small Note (appearing below the subtopic in list item):** Which is the greatest / smallest?

**Dynamic Screens** 1:

* Select the greatest number
* Select the smallest number

**Step 1**: Difference is in 10s place like 18, 212, 7341, 56789

**Step 2**: Difference is in highest digit place like 818, 212, 745, 666

**Step 3**: Difference is in next highest digit place like 8183, 8223, 8342, 8867

**Step 4**: … Continue Step 3 for next digit (use 4 digit numbers)

**Dynamic Screens** 2:

* How many numbers can you make?

**Step 1**: Use 4-digit numbers and a bottom text box to enter only four digits. Ask user to enter a number. When the number is entered, display it at the bottom of text box in a flow layout. Ask user to enter at most 6-7 numbers.

**Step 2**: Ask user now to find the greatest and the smallest among them.

**Step 1-2 (variation)**: Ask user to enter a number such that no digit is repeated.

**Dynamic Screens** 3 (try):

**Step 1**: Display 4 digits and a text box below. Ask user to form the greatest 4 digit number. Show help on how to approach.

**Step 2**: Display 3 digits, ask user to form a 4 digit number (greatest, smallest) by using repetition of only one number twice.

* 1. **Knowing our Numbers (Subtopic**: Arrange numbers)

**Dynamic Screens** 4:

**Step 1**: Form a greatest and smallest number with any 4-digits where unit’s place is always 7, ten’s place is always 2, hundred’s place is always 9.

**Step 2**: Take two digits say 2 and 3 and make 4 digit numbers by using both equal number of times. Greatest? Smallest? How many can you make?

**Dynamic Screens** 5:

**Step 1**: Display 3 people with their heights. Ask which one is taller and which one is shortest

**Step 2**: Arrange them in increasing order / decreasing order

**Step 1**-2 (variation): Display 5 Fridges with price, arrange in ascending / descending order.

* 1. **Knowing our Numbers (Subtopic**: Shifting digits)

**Dynamic Screens** 6:

**Step 1**: Display 3,4,5 digit numbers in individual blocks and exchange the digits

* 1. **Knowing our Numbers (Subtopic**: Introducing 10000, lakh, ten lakh, crores)

**Dynamic Screens** 6:

**Step 1**: Display blocks for greatest n-digit number then ‘+’ then empty text box then ‘=’ then smallest n+1-digit number. Ask user to enter. For 2,3,4.

**Step 2:** Display blocks for smallest n-digit number then ‘\*’ then empty text box then ‘=’ then smallest n+1-digit number. Ask user to enter. For 2,3,4.

* 1. **Knowing our Numbers (Subtopic**: Place Values)

**Dynamic Screens** 7:

**Step 1:** Display a number, ask user to split it in place values

5435 = 5000 + 400 + 30 + 5 easy to hard

**Step 2**: Display a number, ask user to split it in place values

5435 = 5 \* 1000 + 4 \* 100 + 3 \* 10 + 5 easy to hard

**Step 3**: Display a number, ask user to enter the text ‘forty five thousand four hundred eighty in blocks.

**Step 4**: Display table with thousand, hundred, ten … in one column and numbers splitted in another.

* 1. **Knowing our Numbers (Subtopic**: Use of commas)

**Dynamic Screens** 8:

**Step 1:** Use of commas. Show long numbers and ask user to insert comma. Display a number and provide a text box below to enter the same number with commas.

* 1. **Knowing our Numbers (Subtopic**: Same as 2.4 with International system)
  2. **Knowing our Numbers (Subtopic**: Same as 2.6 with International system)
  3. **Knowing our Numbers (Subtopic: write numeral)**

**Dynamic Screens** 9:

**Step 1:** Write the text for a number and ask user to write numeral (with comma / without comma)

* 1. **Knowing our Numbers (Subtopic**: Convert Indian to International)

**Dynamic Screens** 10:

**Step 1:** Fill in the blanks

1 lakh = \_\_\_ ten thousand …

* 1. **Knowing our Numbers (Subtopic:** mm, cm, **…)**

**Dynamic Screens** 11:

**Step 1:** Display fill in the blanks for testing conversions from mm, cm to km.

**Step 2:** Display multiple steps of conversions in fill in the blanks

**Dynamic Screens** 11:

**Step 1: S**how a list with top ten biggest cities with distance info,

* 1. **Knowing our Numbers (Activity)**

**Dynamic Screens** 12:

**Step 1: S**how a question like,

A **box** contains **2,00,000 medicine tablets** each **weighing** **20 mg**. What is the total **weight** of all the **tablets** in the box in **grams**?

**Step 2:** Display a graph of dustances travelled by the bus from A to G to A, in zig-zag way, use textPath to display distance. Ask questions like what is the total distance between A to F? How much time it takes for the bus travelling with 60 km/hr to reach F from C?

**Step 3:** Display a shop with items sold with price per kg / item count. Also, display total ietms sold. Ask question like, Total weight of apples and oranges sold? Total money by selling items. Find the item which was sold with highest price.