

JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY, SECTOR-62

NOIDA

Ds -Project Report

SU-DOKU

**SUBMITTED TO: *Mrs. Jolly D.Shah***

**SUBMITTED BY:**

***Tanmay Sinha (10103471)***

***Harsh Bhatia (10103487)***

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***INTRODUCTION***

Su-doku, which in Japanese means Su-‘number’ and Doku- ‘bachelor’ or ‘single’.

It is a name given to a number placing puzzle. It consists of a9x9 square or grid, having 9 horizontal rows and 0 vertical columns, divided into 3x3 boxes or houses. There can be variation by creating smaller or bigger grid size and thereby reduced or increased number of boxes, but presently this size and no is most popular.

The digits 1 to 9 are so placed that every horizontal row, and every vertical column and every 3x3 box has one digit, without repeating the numbers in the same row, column or box. It becomes a puzzle when few numbers are only places in some cells and others are left empty for you to think logically and provide, where guessing will not help.

**RULES OF SU-DOKU**

A Sudoku consists of 81 square placed in a square(9x9) formation. These 81 squares are further subdivided (three- dimentionally) into three combinations of nine squares each, namely –

i)Horizontally into 9 ‘Files’

ii) Vertically into 9 ‘Ranks’

iii) into 9(3x3) ‘House’(or mini boxes)

Now, each and every ‘File,’Rank’ and ‘house’ has nine squares (jointly called grids).

Each grid (of 9 square) is ‘Home’ to one set of nine single digits (1-2-3-4-5-6-7-8 and 9).

No digit appears twice with in the same ‘File’ ‘Rank’ and every (3x3) ‘House’ contains digits 1 to 9.

***HEADER FILE USED***

**1. <stdio.h>** - for standard input and output

**2. <conio.h> -** for console input and output

**3. <graphics.h> -** for including graphics

**4. <stdlib.h> -** standard library files

**5. <dos.h>-** used for time function or delay function

**6. <alloc.h> -** for allocation of memory to

pointer variables.

**7. <string.h> -** for using string of letters or for taking

words.

**8. <math.h>-** for operating mathematical functions.

**9. <time.h>-** for setting time related syntax.eg. delay

***SYNTAXES USED***

**1. Setbkcolor –** for setting background color

**2. Setcolor –** for setting color for particular thing

**3. Circle –** for making a circle

4. **Settextstyle –** to set the color, font, size & position of a text

5. **Outtextxy**- to set coordinates of the text.

6. **Delay-** for time delay.

7. **Rectangle**- for making rectangle.

8. **Bar**- for making a filled rectangle.

9. **Line**- for drawing line.

10.**Floodfill-**to fill the colour in any bounded region.

11**. gotoxy-** to go to some specific location in the screen.

***FUNCTIONS USED***

{void main();

void single\_book(int);

void double\_book(int);

void single\_due();

void double\_due();

void single\_cancel();

void double\_cancel();

void inquiry();

void show();

void show1(int,int);

void exit1();

void exit2();

int status1();

int status2();

int next();

void wrong();

void welcome();

void prompt();

void cancel();

void due1();

void case2();

void light();

void show1(int,int);

void display(int);

void graph();

void set(char[7][7],int);

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