

## Use of software in planning kitchen interiors

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### ABSTRACT

With a little imagination and inexpensive planning the worker can transform the kitchen into a comfortable and pleasant working place and make the kitchen an enjoyable place and unhateful necessity. Keeping this in mind the present investigation was carried out in Hisar and Nagpur districts of Haryana and Maharashtra State, respectively in India. In order to develop a software program on cost estimation of kitchen interiors, relevant statistical procedures were adopted to draw meaningful inferences from interview schedule. A suitable computer programming language was chosen to develop a software that can provide a Graphical User Interface (GUI) to the target audience, and is convenient to use and more informative. Opinion of respondents regarding practicability of software programme on "Cost Estimation of Kitchen" revealed that utility of software was felt "very useful" by most of the respondents.

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**Key words :** Kitchen, Interiors, Cost estimation

Most housewives do spend a large part of their working day in the kitchen. Careful use of space is as important in a large kitchen as in a small one. In a modern house kitchen has completely changed in design, look and functions. Kitchen design has indeed come a long way, and today's kitchens are far removed from the dark dingy spaces one saw earlier. Contemporary kitchens are good-looking and extremely functional, with sleek lines, slick colours and polished surfaces. The emphasis is on practicality, with ease of maintenance and labour-saving options given prime consideration (Shahani, 1997). It has been said that 'A well-planned, well-equipped kitchen is an asset to any home, and a truly worthwhile investment, as it makes cooking a pleasure and household tasks less of a chore.' Nothing is closer to the truth than this and nothing easier to achieve, provided it is done systematically, patiently and innovatively.

Therefore, a software programme was developed to make planning process of kitchen interiors an easy job for homemakers.

### METHODOLOGY

The main objective to prepare the computer software for cost estimation of kitchen was to provide knowledge regarding technical and standard aspects of kitchen along with the actual cost estimation of kitchen based on different parameters chosen by the respondents while designing their kitchen. Relevant literature was collected from libraries, market and architects regarding all the technical aspects related to designing of a kitchen. Various varieties of kitchen equipment's, their dimensions with cost were collected from market to give the target audience a default estimation of an average middle class

kitchen on which an individual can modify parameters according to his or her budget, choice of material and design. A suitable computer programming language was chosen to develop a software that can provide a Graphical User Interface (GUI) to the target audience, and is convenient to use and more informative. The developed software was demonstrated to target audience for their response and minor alterations and modifications were made in the software to incorporate their suggestions.

The contents and sub-contents of software programme were selected after referring relevant literature and finally administered to 20 private architects, builders and contractors from Nagpur and their opinion was sought regarding the relevance of each content based on kitchen standards to be included in development of software programme. Relevancy was assessed from judges in terms of most appropriate, appropriate and not appropriate with the assigned scores of 3, 2 and 1, respectively. On the basis of judges response mean scores were worked out and the contents were ranked accordingly so that highly ranked contents could be selected for software program. For easy running of software program developed, users manual was prepared to enable any person familiar with computer operation to implement the software effectively.

### RESULTS AND DISCUSSION

#### *Utility of software programme on cost estimation of kitchen as perceived by respondents:*

The opinion of the respondents regarding practicability of software programme on "Cost estimation of kitchen" was generated on the basis of the questionnaire. The respondents were given a

**Estimation**

**Layouts**

- One Wall
- Two Wall
- L-Shape
- U-Shape

**Type Of Sink**

- Single: 1695
- Single With Wastebin: 4180
- Single With Drain Board: 3000
- Double: 5470
- Double With Single Drain Brd: 6685
- Double With Double Drain Brd: 9325
- Double With Waste Bin: 7200

**Kitchen Accesories**

- Chimney: 7200
- Hob: 13000
- UtinselRack

**Lighting**

- Switch 5AMP: 0 | 5
- Switch 15 AMP: 0 | 18
- Socket 5 AMP: 0 | 8
- Socket 15AMP: 0 | 18
- Bulb Point: 0 | 6
- Tube Light Point: 0 | 6
- Fan: 0 | 500
- Exhaust Fan: 0 | 590

**Flooring Material**

- Brick's Teep: 12
- Cemented: 20
- Kota: 30
- Kaddapah: 35
- White Cement: 40
- Marble: 40
- Granite: 90
- AnyOther: 0

**Size Of Kitchen**

Length: 10  
Width: 8

**Door**

Height: 7  
Width: 3

**Counter Material**

- Wooden Phatta: 10
- Cemented: 20
- Kota/Kaddapah: 30
- Marble: 40
- Lamination: 50
- Stainless Steel: 60
- Granite: 90
- AnyOther: 0

**Window**

Height: 4  
Width: 5

**Other Options:**

- Cooking Range Used
- Fridge Inside The Kitchen
- Cost Of Wall Storage: 250
- Cost Of Base Cabinet: 200
- Splash Back Tiles: 30
- Cost Of Door Material: 90
- Cost Of Window Material: 70

OK

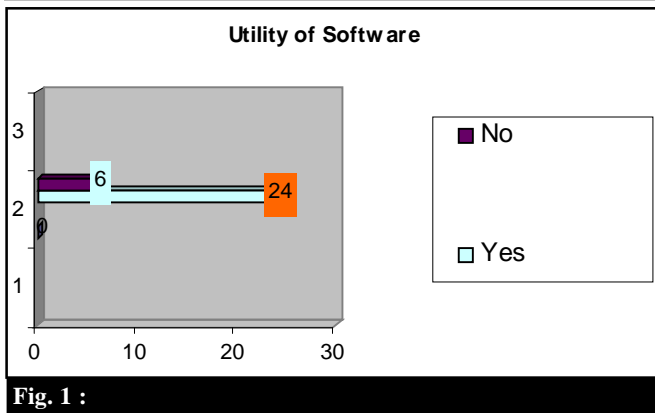


Fig. 1 :

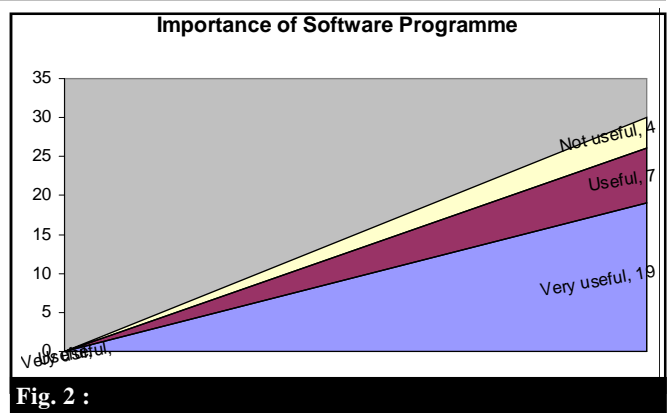


Fig. 2 :

demonstration of the developed software and the data obtained thereon, have been presented under :

The need felt by respondents for awareness

regarding different technical factors to be taken into consideration before construction/renovation of kitchen interiors is displayed in Fig. 1. Most of the respondents

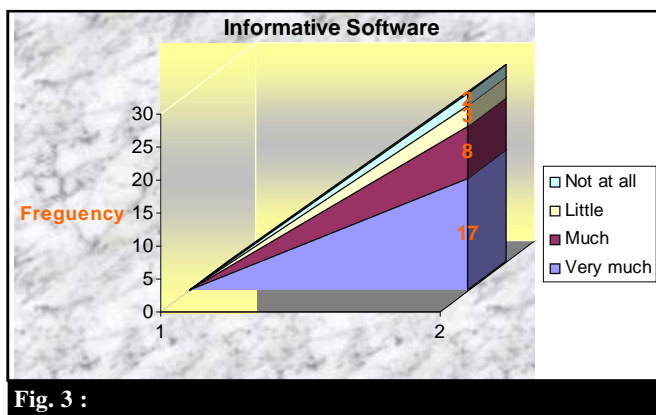
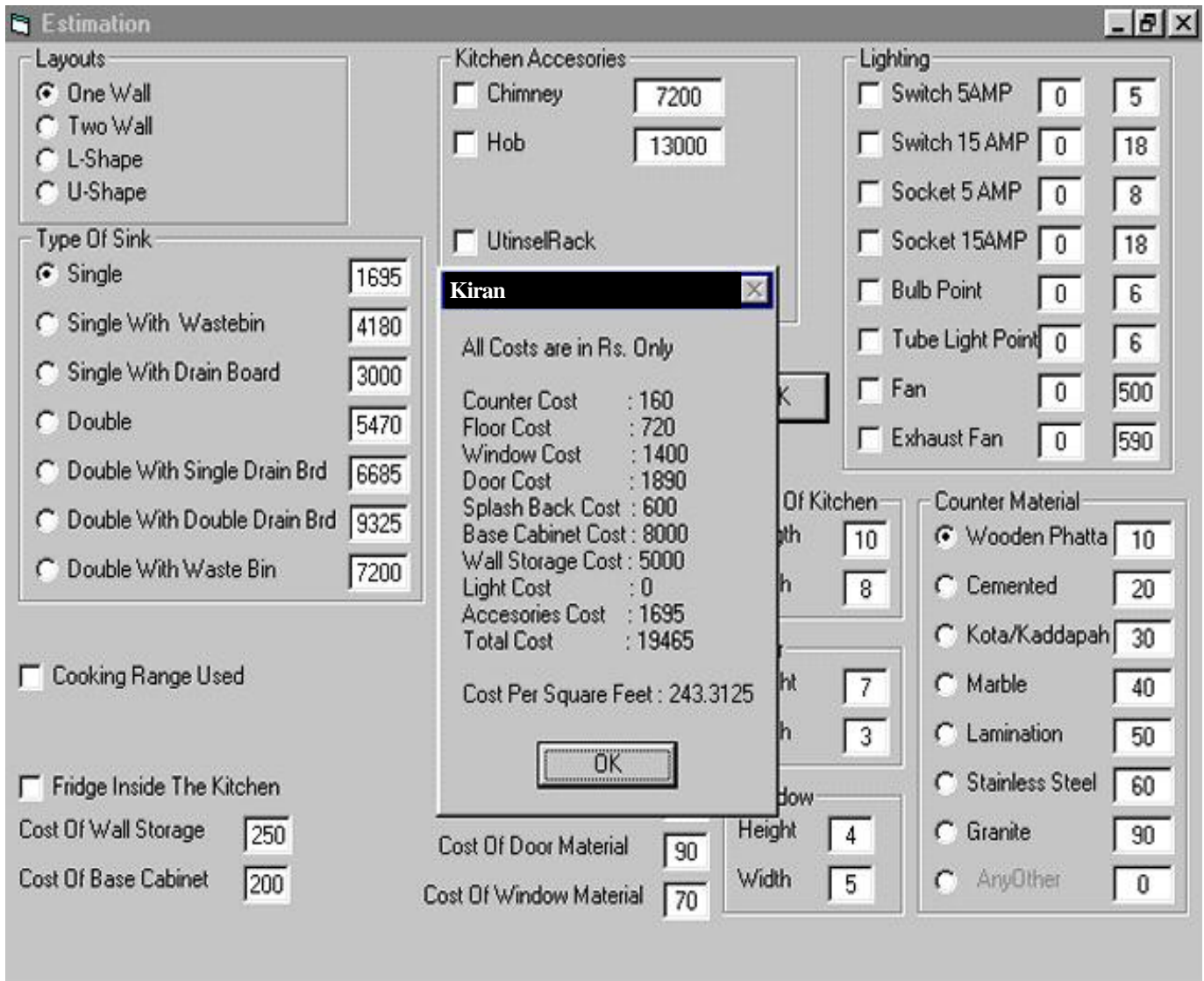


Fig. 3 :

(80.0%) were of the view that technical factors should be considered while going for construction /renovation of kitchen interiors in a house. So far as the utility of the software for cost estimation of kitchen interiors is concerned, many respondents (63.3%) found the same to be very useful, while 23.3 per cent and 13.3 per cent

found the software to be simply useful and not useful, respectively.

Much of the respondents (56.6%) supported the view that the software programme would be “very much helpful” to those planning to take up construction/renovation of kitchen interiors in a house, while only 10.0 per cent of them opined that it would be of “little use” to them.

Regarding usefulness of different components of software; 83.3 %, 86.6%, 80.0% and 86.6% of the respondents felt type of kitchen, layout of kitchen, work triangle and kitchen appliances to be most relevant component of “enquiry” part, while other component of same, viz., standard measurements (76.6%), lighting (73.3%), ventilation (66.6%), storage (70.0%) and material of kitchen (63.3 %) were found to be relevant by the respondents (Fig. 2). So far as the “estimation” part of the software and is concerned : 83.3 %, 86.6%, 80.0%, 73.3% and 86.6% of the respondents regarded

**Table 1 : Perception of experts regarding contents of software programme**

	Relevancy					
	Most relevant		Relevant		Irrelevant	
<b>A. Enquiry</b>						
Type of kitchen	25	(83.33)	4	(13.33)	1	(3.33)
Layout of kitchen	26	(86.67)	3	(10.00)	1	(3.33)
Work triangle	24	(80.00)	4	(13.33)	2	(6.67)
Standard measurement	6	(20.00)	23	(76.67)	1	(3.33)
Lighting	5	(16.67)	22	(73.33)	3	(10.00)
Ventilation	8	(26.67)	20	(66.67)	2	(6.67)
Kitchen appliances and accessories	26	(86.67)	4	(13.33)	2	(6.67)
Storage	7	(23.33)	21	(70.00)	2	(6.67)
Construction material	7	(23.33)	19	(63.33)	4	(13.33)
<b>B. Estimation</b>						
Layout of kitchen	25	(83.33)	4	(13.33)	1	(3.33)
Type of sink	26	(86.67)	3	(10.00)	1	(3.33)
Cooking range used	24	(80.00)	4	(13.33)	2	(6.67)
Fridge inside the kitchen	12	(40.00)	2	(6.67)	16	(53.33)
Cost of wall storage	6	(20.00)	23	(76.67)	1	(3.33)
Cost of base cabinet	7	(23.33)	23	(76.67)	0	(0.00)
Counter material	22	(73.33)	8	(26.67)	0	(0.00)
Kitchen accessories	9	(30.00)	24	(80.00)	1	(3.33)
Cost of door material	6	(20.00)	23	(76.67)	1	(3.33)
Cost of window material	6	(20.00)	24	(80.00)	0	(0.00)
Flooring material	26	(86.67)	3	(10.00)	1	(3.33)

Figures in parentheses indicate percentage

layout, type of sink, cooking range used, counter material and flooring material, component to be most relevant while only 53.3 per cent of the respondents opined “ Fridge inside the kitchen” component to be irrelevant.

#### **Conclusion and implications:**

Cost estimation of kitchen interiors was done with the help computer software programme. A suitable computer programming language “Visual Basic” was chosen to develop a software that can provide a Graphical User Interface (GUI) to the target audience, and is convenient to use and more informative.

Further it is recommended by the researcher that in house construction, planning part is the cumbersome job and everybody has to go through it. To make planning part more simpler, computer software programmes are very handy tools. Therefore, such type of software programmes should be developed and applied to such activities.

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#### **REFERENCES**

- Jindal, N. (1995).** A study on existing kitchen conditions and functional designing of the same in rural areas of Ludhiana District- A case study. M.Sc. Thesis, Punjab Agricultural University, Ludhiana.
- Jyoti, B. (1980).** A comparative study of physiological cost of chapati making in squatting and standing positions. M.Sc. Thesis, Punjab Agricultural University, Ludhiana.
- Kahlon, D. (1986).** A study of existing kitchen layouts, needs, problems and preferences regarding existing kitchen facilities of rural families and to develop improved kitchen plans. M.Sc. Thesis, Government Home Science College, Chandigarh.
- Kalra, C.P. (1972).** A study of the existing conditions of the kitchen in the village Sahnewal and formulating guidelines for improving them. M.Sc. Thesis, Punjab Agricultural University, Ludhiana.

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