



## II. STUDY AND MEASURES OF VITAL SIGNS PARAMETERS

### A. Temperature

Temperature recording offers an indication of center temperature that is generally firmly controlled (thermoregulation) because it influences the speed of concoction responses. Temperature is preserved through associate degree effort of the heat created by the body and also the warmth lost from the body. Temperature is recorded keeping in mind the tip goal to line up a pattern for the person's traditional temperature for the positioning and estimating conditions. The principle purpose behind checking temperature is to request any indications of basic malady or irritation inside the sight of a fever (temp > thirty seven.5 °C/101.3 °F or managed worker > three8 °C/100.4 °F), or hoisted altogether over the person's traditional temperature. Completely different reasons for raised temperature incorporate hyperthermia. Temperature discouragement (hypothermia) likewise ought to be assessed. it's likewise noteworthy to audit the pattern of the patient's temperature. A fever of thirty eight °C isn't very showing associate degree ominous sign if the patient's past temperature has been higher. Temperature discouragement (hypothermia) likewise ought to be assessed. it's likewise noteworthy to audit the pattern of the patient's temperature. A fever of thirty eight °C isn't very showing associate degree ominous sign if the patient's past temperature has been higher. A temperature detector could be a contrivance, ordinarily, a thermocouple junction or RTD, that accommodates temperature estimation through associate degree electrical flag. A thermocouple junction (T/C) is made victimization 2 completely different metals that make electrical voltage in direct extent to changes in temperature.

### B. Respiratory rate

Fluctuates with age, but the traditional reference choose a grown-up is 16– 20 for each moment. The estimation of rate of respiration as a marker of potential metabolism brokenness has been researched nonetheless discoveries propose it's of restricted esteem. rate of respiration could be a affordable pointer of pathology states, because the principle capability of breath is evacuation of carbon dioxide departure hydrogen carbonate base offered to be used.

### C. SpO2rate

SpO2 stands for peripheral capillary gas saturation, associate estimate of the quantity of gas within the blood. a lot of specifically, it's the share of ventilated haemoglobin containing oxygen compared to the overall quantity of haemoglobin within the blood (oxygenated and non-oxygenated haemoglobin). SpO2 is associate estimate of blood vessel gas saturation, or SaO2, that refers to the quantity of ventilated haemo protein within the blood. Haemo protein could be a protein that carries gas within the blood. it's found within red blood cells and provides them their red color. SpO2 are often measured by pulse oximetry, associate indirect, non-invasive methodology (meaning it doesn't involve the introduction of instruments into the body). It works by emitting so gripping a light-weight wave passing through blood vessels (or capillaries) within the tip. A variation of the sunshine wave passing through the finger can offer the worth of the SpO2 measuring as a result of the degree of gas saturation causes variations within the blood's colour. This price is diagrammatic by a proportion. If your Witlings Pulse Ox™ says ninety eight, this suggests that every red corpuscle is formed from ninety eight ventilated and a pair of non-oxygenated haemo protein. Traditional SpO2 values vary between ninety five and a thousandth.

### D. Heart rate

Heart rate is the speed of the heart beat measured by the no. of contraction and relaxation of heart per minute (bpm). The normal value of heart rate is 60 to 100 bpm. If any changes in normal heart activity it is consider as abnormality related to the heart and it will lead to cause some life threatening heart diseases like ventricular fibrillation, tachycardia (Fast heart beat) and bradycardia (low heart beat).

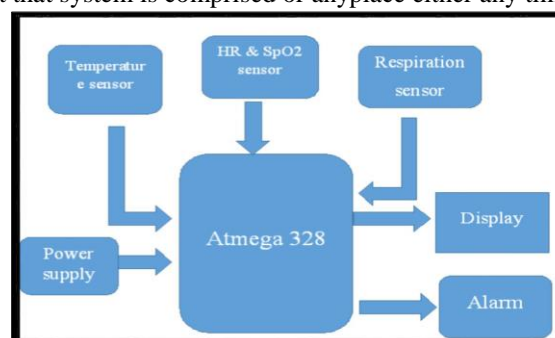
## III. LITERATURE SURVEY ON EXISTING SYSTEM

Most of the system have different different sensors and placed on body. Like for temperature there is thermometer for heart rate there is heartbeat counter for SpO<sub>2</sub> different fingertip sensor or probe. So that system is bulky and time consuming that system is also costly. And the multi para monitor which have sensors combined in one system but it's size increase and costly.

If in emergency case they connect all these things and then check up so may the patient lose their life. And in emergency different sensors attached with patient is irritating for patient so that we decide to make a chair like this to measure vital body parameters.

## IV. PROPOSED SYSTEM

In that project the most purpose is mensuration completely different important body parameter Like vital sign , pulse rate , heart rate , or respiration rate .the construct that system is comprised or anyplace either any time may be measured.



Basic Block-diagram of scmvp



- **RESULT ANALYSIS**

The smart chair is kind of project where body's different parameters are displayed on LCD screen and important parameters are body temperature, heart rate, respiration rate and spo2. that is suitable for any patient who has come for checkup as these above mentioned parameters are so useful to measure this chair not only useful in hospital but also used for home, gym, fitness centre, etc.



*SMART CHAIR FOR THE DETECTION OF THE BODY VITAL PARAMETER*

As a person or patient sits on the chair, they wear a mask that measures respiration rate. The result given in breaths per minute is approximately 12 to 20 bpm for adults and 20 to 30 for children. One hand on the chair measures body temperature, showing a result of 36.5 to 37.5 Celsius (97.8 to 99 Fahrenheit) for a healthy adult. The other hand measures heart rate and spo2, which will show a normal rate of 72 beats per minute (BPM) or spo2, which should be 94 to 100% that indicates a healthy level of hemoglobin carrying oxygen through the blood.