**MOM**

**(Pregnant &After-Pregnant MOM Caring Web Site)**

**BRD**

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**Introduction**

**Executive Summary**

MOM is an online care offering information and service to every pregnant and after-pregnant mom. This site should offer effective answers and information covering each month of pregnancy. It should offer proper feeding methods and exercises for the mother. MOM can be used by every pregnant women and new mom. MOM can be used to help them contact with their doctor at any time easily by Online Discussion. MOM provides safe and credible information Securely.

**Document Overview**

This document introduces MOM study plan. It introduces general description, technical description, development plan, operation plan.

**Business Objectives**

* Offer free service for every Pregnant& After Pregnant Mom.
* Offer easy and effective online information for pregnant& After Pregnant Mom.
* Offers nutrition and exercising.
* Offer a continuing follow up for each pregnant& After Pregnant Mom.
* Offer an online, open discussions for mothers with doctors.
* Offer newborn care.

**Background**

**Introduction [1]**

Motherhood is a complex role, an experience full of responsibilities and varying emotions. Online mothers’ websites are an effective way to gather information about everything related to them. As females mature such message continue, motherhood is a societal role that requires complete devotion, including the sacrifice of women’s own needs and desires. When the realities and responsibilities of motherhood finally emerge, mothers can become depressed and feel like they failed themselves, their families, and society.

When women have found out that they are pregnant, there are a lot of things they need to know. Sometimes just knowing where to start and which information they can trust can be a challenge. During pregnancy, both physical and mental caring is required. Emotionally, they will be going through a lot of changes as their pregnancy progress. They may also have a lot of questions on what is safe during pregnancy.

Caring for a baby, from before they are born is a very expensive and time-consuming responsibility and privilege. Nobody can guarantee success in raising a child. To have the greatest chance of success in having a happy, healthy and intelligent baby, they must have someone who is knowledgeable watching and caring for their baby at all times.  Any accident, sickness, poisoning, or a neglectful moment, can cause their baby's life to change for the worse.

Nobody is born with this knowledge of properly caring for a baby. their best chance of success is to educate themselves and the people around them who will be taking care of the baby, and to constantly learn what their will need to know next as their baby grows.  they also need to think. Nothing is more important than thinking themselves.  Educate themselves, listen to advice, read, watch, listen, look and then think. MOM Web Site will help them do that.

**Survey [2]**

For many of us, it's the first word we hear when we wake up in the morning and the first word in our social media bios. But "mama" is so much more than a word. It's a privilege, it's a promise, and for many millennial mothers, it's central to their identities.

According to the results of [an organization new survey released by motherly](https://motherly.s3.amazonaws.com/Motherly%20State%20of%20Motherhood%20Survey%20Results_Cleaned%20and%20Weighted.pdf), 60% of millennial moms say motherhood is what defines them the most.

They are moms first, and the rest of the survey results suggest it’s time for society to recognize that, and to give them the support they need.

this organization asked 5,700 moms if society does a good job of understanding and supporting mothers and a whopping 74% said no, with 49% suggesting stronger government policies around paid family leave and childcare would be a great place to start, and 20% noting a shift toward flexible work culture would be the best way for society to support moms.

**Types of care she needs:**

**Medical care**

Medical care consists of prenatal (before birth) and postpartum (after birth) healthcare for mothers and babies.

It involves treatments and trainings to ensure a healthy pregnancy, and mom & baby healthy caring after-pregnancy.

Once she become pregnant, she’ll need to schedule regular healthcare appointments throughout each stage of her pregnancy.

A schedule of visits may involve seeing her doctor:

* every month in the first six months she is pregnant.
* every two weeks in the seventh and eighth months she is pregnant.
* every week during her ninth month of pregnancy.

During these visits, her doctor will check her health and the health of her baby.

Visits may include:

* taking routine tests and screenings, such as a blood test to check for anemia, HIV, and your blood type.
* monitoring her blood pressure.
* measuring her weight gain.
* monitoring the baby’s growth and heart rate.
* talking about special diet and exercise.

Later visits may also include checking the baby’s position and noting changes in her body as she prepares for birth.

her doctor may also offer special classes at different stages of her pregnancy.

These classes will:

* discuss what to expect when she is pregnant.
* Prepare her for the birth.
* teach her basic skills for caring for her baby

If her pregnancy is considered high risk because of her age or health conditions, she may require more frequent visits and special care. she may also need to see a doctor who works with high-risk pregnancies.

MOM website will make a profile for her which have her medical information and another information about her.

And we will send her notifications of her doctor visits time or any necessary notification she will need, like: medical tests for her and her baby.

# Emotional care

Pregnancy emotional support is needed right from the start and it can often be a difficult thing.

If a woman finds herself on her own during her pregnancy, she needs pregnancy emotional support in an even greater way. There are many pregnancy support groups where a woman can find the encouragement and combined strength of other women to help nurture her and get her through some of the fears and tough times that assail a woman's mind. In some cases a woman opts for an abortion because she can't cope with the emotion stress of pregnancy - then there's a need for abortion support. There are clinics and groups available to help in that instance, too.

MOM website will provide her with emotional care while pregnancy and after-pregnancy by exercises which improves her mood and strengthen her body, online discussions with another moms & doctors when she needs support, and we Take care of she throughout pregnancy and after-pregnancy.

# Physical care

Many pregnant women are concerned about moderating their activities. However, most women can continue their usual activities and exercises throughout pregnancy. Mildly strenuous sports, such as swimming and brisk walking, are good choices. Vigorous activities, such as running and horseback riding, are also possible if done cautiously, to avoid injury, particularly to the abdomen. Contact sports should be avoided .Concern about exercising during pregnancy stems from misinformation.

Some physicians do not feel comfortable recommending different types of activities for pregnant women. However, physical activity during pregnancy has many benefits, yet there are certain situations when women should consult a doctor before exercising or not exercise at all.

If a woman is trying to become pregnant, she should begin an exercise program (if she isn't doing one already). Many women believe that healthy habits should be adopted only after becoming pregnant however, if physical activity was not practiced prior to conceiving, beginning an intense exercise routine during pregnancy is not recommended. This is especially true during the first trimester, as it is the time when fetal organs are developing. Nevertheless, low impact exercises, such as walking are allowed and even recommended during pregnancy.

During pregnancy it is very important to listen to your body. It is important to remember that physical activities during pregnancy can compete with the fetus for energy resources such as sugar and oxygen, causing an increase in body temperature. Women who exercised prior to becoming pregnant still need to be aware of several things:

* Adequate nutrition - daily calorie intake should increase according to the amount of activity.
* She should Pay attention to her body - if she experiences symptoms such as abdominal pain, unusual discharge, bleeding, shortness of breath and dizziness, she should contact her doctor immediately.
* There are situations where physical activity is not recommended or needs to be customized and therefore it is important to consult her doctor.
* It is important to maintain consistency of physical activity throughout the pregnancy. It is highly recommended to follow the "walk and talk" formula - if she can talk during her activity without panting, she is exercising at the right intensity.

* Ensure that her body temperature does not get too high, wear suitable clothing and drink enough fluids. Avoid activities that may cause trauma to the stomach such as ball and racket games or activities in which loss of balance may endanger the mother and fetus, such as exercise equipment and horseback riding.

* Exercising during pregnancy prevents excessive weight gain and makes losing the weight easier. Gaining excess weight during pregnancy is linked to complications in pregnancy and child birth.
* Back pain is common during pregnancy, physical activity can help reduce and alleviate pain.

* Woman who exercises regularly should do 30-40 min of physical activity 3-4 times a week.
* All activities should be started off gradually. Be sure to stretch but with caution since joints are more sensitive during pregnancy.

**Kinds of exercises which can pregnancy do them:**

* **Swimming** - Out of all exercises, swimming is the most highly recommended. It works on all muscle groups, unlike other activities which work primarily on the lower body. In addition to the fact that the weight of the body is distributed well, blood flow improves and the water is a great cooling mechanism.
* **Weights** - Working out with weights is good during pregnancy however, be sure to use low weights and perform multiple repetitions.
* **Yoga, Pilates**- Suitable for those experienced in these activities as long as it does not involve abdominal squeezing.

**Exercising regularly throughout pregnancy is very important because it:**

* Helps maintain physical fitness
* Aids digestion
* Facilitates weight control
* Balances blood sugar in cases of gestational diabetes
* Reduces incidences and severity of back pain
* Improves the feeling of well-being and your self-image
* Lowers the level of stress, anxiety and depression that often appear during pregnancy

MOM website will provide her with: exercises which she can do while pregnancy & after-pregnancy, and information to have physical health.

**Nutritional care**

* What does diet during pregnancy mean? When we refer to diet during pregnancy, we are not speaking about restricting calories or trying to lose weight. Dieting to lose weight during pregnancy can be hazardous to her and her baby, especially since a weight loss regimen may restrict important nutrients such as iron, [folic acid](http://americanpregnancy.org/pregnancyhealth/folicacid.html), and other important vitamins and minerals.
* Therefore, it recommends avoiding popular diets such as Atkins, South Beach, The Zone, Raw Food Diet, and so on.
* Fruits and Vegetables: Fruits and vegetables contain many important nutrients for pregnancy especially, Vitamin C and Folic Acid. Pregnant women need at least 70 mg of Vitamin C daily, which is contained in fruits such as oranges, grapefruits and honeydew, and vegetables such as broccoli, tomatoes, and Brussels sprouts.
* In order to prevent neural tube defects, 0.4 mg of folic acid per day is recommended. A good source of folic acid can be found in dark green leafy vegetables (other sources of folic acid include legumes, such as black or lima beans, black-eyed peas, and veal). she should have at least 2-4 servings of fruit and 4 or more servings of vegetables daily.
* Breads and Grains: The body’s main source of energy for pregnancy comes from the essential carbohydrates found in breads and grains. Whole grain and enriched products provide important nutrients such as iron, B Vitamins, fiber and some protein, even. she can get the required amount of folic acid from fortified bread and cereal.
* Depending on her weight and dietary needs, she should consume anywhere between 6-11 servings (6-11 oz) of breads/grains daily.
* **Protein:** Meat, poultry, fish, eggs, and beans contain the protein, B vitamins and iron needed in pregnancy. her developing baby needs plenty of protein, especially in the [second](http://americanpregnancy.org/duringpregnancy/fetaldevelopment2.htm) and [third trimesters](http://americanpregnancy.org/duringpregnancy/fetaldevelopment3.htm). Iron helps to carry oxygen to her growing baby, and also carries oxygen to her muscles to help avoid symptoms such as [fatigue](http://americanpregnancy.org/during-pregnancy/fatigue-during-pregnancy/), weakness, irritability, and [depression](http://americanpregnancy.org/pregnancyhealth/depressionduringpregnancy.html).
* **Dairy Products:** At least 1000 mg of calcium is needed daily to support a pregnancy. Calcium is essential for building strong teeth and bones, normal blood clotting, and muscle and nerve function. Since her developing baby requires a considerable amount of calcium, her body will take calcium from her bones, if she do not consume enough through her diet (which can lead to future problems, such as osteoporosis).
* **REMEMBER**: a [prenatal vitamin](http://americanpregnancy.org/pregnancy-health/prenatal-vitamins/), or any other supplement can only complement a healthy diet during pregnancy.

**System Description**

**What is MOM?**

Mom is a website takes care of the mother from the first minute in her pregnancy & her food and her body, and after giving birth in every step, as she can online discuss with doctors to ask them any question, and how can child rearing and take care about him. Mom also takes care about women’s psychological issues in those periods. Mom can send notifications to mommies to remind them with the most common problems and psychological emotions at this period and how to overcome that, also remind them of vaccination dates of their children.

In this time, she needs both emotional & ph­­ysical care and support during pregnancy. We will provide full care for her and advise her.

**Notifications**

At first, she will sign up and create a profile, this acquired information will helps us to make calculations for her. We will send her notifications with her doctor’s appointments, fetal growth stages, and medical tests.

**Posts**

There will be a section for discussions and posts so that mother could communicate with others and doctors and could know other’s problems and how they act with them.

**System Architecture**

MOM system introduces huge amount of information and cares and other services. The system offers the contents and service to both mobile and desktop users via web-based or dedicated mobile software.

 

The system consists of following modules: (1) Storage, (2) Data processing (3) Data Analytics, (4) General User Area,(5), System Administration ,(6) Security.

Storage

System Administration Area

Data Analytics

Data processing

Security

General User Area

Storage

MOM uses different types of storage:

● Archive storage for historical changes, deleted contents and old logs

● System storage for system configuration, users’ information and fresh logs

● Analytics storage(s) to store the outcomes of data analytics module

Core storage uses MYSQL unstructured database installed over distributed infrastructure.

Data replication is configured to minimum which full data availability and data recovery needs of archiving information**.**

Data processing

Data processing module is responsible on providing all data related services like data modeling and correction.

Data modeling and correction is required to understand the textual information based on the related language model, this will allow better revision and improve the quality of Data material and to do a good analysis on it to know her special calculations. Data transformation is required to allow import and export of different data format. The system supports common data formats supported by common data processors applications.

Data Analytics

Mom holds huge amount of contents which includes information, user interaction and logs. This module is important to study the contents and produce very useful result. Basically this module support following data analytics this analysis is important to avoid generating profile having similar data. Quality analysis to study the correctness of information contents based on user interaction. High quality contents will be published to all users. Low quality questions are used only by their authors and related users.

General User Area

This website provides pregnant women with many instructions and guidance during the period of birth and how takes care of themselves, it also provides communication with others, asking questions and communicating with specialized doctors. In additions, give her exercises and proper nutrition. General system support martial are published to help users. However users can communication with system operators to report issues or to get a direct support.

System Administration Area

This module is dedicated for system administrators. System administrators responsible on system management, configuration and solving technical issues. System administrator can view system status, data status logs and other system status and measures.

Security

Security module is responsible on user authentication and communications security. User can register/login using internal accounts or via their phones or common social accounts. The portal access is made using https protocol in order to secure the communication. Security module also, responsible on managing the permissions and roles. Users are guests, logged users or doctors.

**System Features**

Create profile

MOM provides creating an account for mothers that contains her personal information including fetal size and changes that occurs to him, her weight, her medical analysis, her baby information and follow up, and guides, foods, exercises to do at her various stages.

Doctors could sign up and we will distinguish them by giving them a sign so that users could know they are doctors.

Ask questions

MOM provides open discussions between mothers and doctors that mother could ask any question and doctors or another women could answer this question.

Doctors could share posts with users and discuss common topics. Doctors also could be psychologists.

Mother could also share articles and information with others and they also can interact with her

Nutrition

Good [nutrition](https://www.webmd.com/health_and_wellness/diet_and_nutrition.htm) during [pregnancy](https://www.webmd.com/pregnancy_and_family/pregnancy.htm) improves your chances of having a [healthy baby](https://www.webmd.com/parenting/baby/default.htm). It may even reduce the risk of certain chronic conditions in your child, long after he has grown.

User can use the system to know general information about nutrition such as what to eat and what not to eat and how much she should eat in a day

Good nutrition during pregnancy can help to keep you and your developing baby healthy

Exercising

Maintaining a regular [exercise](https://www.webmd.com/fitness-exercise/guide/default.htm) routine throughout your [pregnancy](https://www.webmd.com/baby/default.htm) can help you stay healthy and feel your best

User can use the system to get exercising instructions, know what she should avoid and get general knowledge about working out and its benefit for the body.

Notification

This site will send notifications to users’ especially pregnant woman to remind her dates with doctors and medical tests then after pregnancy remind vaccinate children.

During pregnancy, site will send important articles to understand her psychological conditions.

Tools

MOM will be developed using open source tools, languages and Servers. Commercial tools will be used in case there is no open source alternative. This will decrease the cost especially for long term operation.

While development only online tools will be used for management, tracking, testing and source control.

This will increase the collaboration between team members even they are not located at the same place. Also, this will allow external teams and members to participate.

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| Operation | Recommended Tool Source Control |
| Source Control and Versioning | GitHub |
| Tasks and Issues Tracking | GitHub |
| Structured Database | MySQL |
| Programming Languages | PHP |
| Host Management | cPanel |

**References**

**1** ) **) book :** **A QUALITATIVE APPROACH TOWARD UNDERSTANDING THE TRANSITION**

**FROM CAREER TO FULLTIME MOTHERHOOD**

**2 )** url:[**https://www.mother.ly/news/2018-state-of-motherhood-survey-millennial-mothers-need-more-support**](https://www.mother.ly/news/2018-state-of-motherhood-survey-millennial-mothers-need-more-support)

**3)** [**http://americanpregnancy.org/pregnancy-health/diet-during-pregnancy/**](http://americanpregnancy.org/pregnancy-health/diet-during-pregnancy/)