Calisthenics Structure: Rebuilt Physical Body from Brick to Brick

1 Introduction

Calisthenics is a physical exercise where the only equipment you need is your own body. It is more than just a workout—it requires accurate movement, discipline, and a testament to human strength and resilience. From historical warriors to present street athletes, bodyweight training has been a foundation for rebuilding peak physical structure. It develops the growth of a normal person to a supreme level.

2 Literature Review

Physical activity outside significantly contributes to health benefits. Mello et al [1] studied during early adolescence when children are inclined to become less active. Nelson et al [2] recommended regular muscular fitness exercise should be considered physical activity settings. Dorgo et al [3] preferred strength training as a powerful way to go beyond mere physical conditioning; it transforms both the body and mind purposes [4]. Benelli et al [5] encourage children to engage actively in physical education lessons or to enhance obedience with physical activity initiatives [6]. Among the various types of strength training workouts (such as free weights, machines, elastic bands, and manual resistance), calisthenics, which rely on body weight for resistance, serve as practical and affordable alternatives that can effectively engage the neuromuscular system of children and adolescents [7]. Dahab et al [8] studies have shown that this group can experience strength improvements from training, primarily attributed to neuromuscular transformation. Enhanced coordination of internal and external muscles increases strength, enables good performance in sports, and reduces the risk of injuries [9]. At last, physical strength training with a calisthenics workout is an effective choice for physical structure building, indicated by the favorable cost-benefit ratio from a higher study [10].

3 Proposed Methodology

The Data Flow Diagram (DFD) for identifying individuals in a calisthenics training program follows a structured process. Next, a fitness estimation is conducted for mobility. It categorizes participants into Beginner, Intermediate, or Advanced levels. Based on their classification, a customized training plan is assigned to match their fitness level.

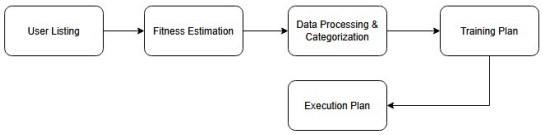

Figure 1: Rebuilt physical body from brick to brick

3.1 User Listing

Essential details such as name, age, weight, height, fitness background, and medical conditions are collected to ensure a safe training plan.

3.2 Fitness Estimation

Push-ups, pull-ups, squats, planks, flexibility drills, and core endurance exercises are conducted to evaluate their fitness level.

3.3 Data Processing & Categorization

Collected test results are analyzed to classify participants into one of three categories (Beginner, Intermediate, Advanced).

3.4 Training Plan

A personalized workout plan is assigned based on the user's level:

- Selecting goal
- Time scheduling for exercise
- Rest and recovery method

3.5 Execution Plan

Monitoring workouts to ensure the training remains effective. This process motivates users to come up with new ideas.

4 Time Schedule

	January	February	March	April	May	June	July
Requirement Analysis							
Data Collection							
Database Development							
UI Design							
Testing							
Deployment							
Maintenance							

5 Budget

This budget applies only to beginners. When the user improves to the next level, this budget will increase as per the tool price for the intermediate or advanced level.

Item	Estimated Cost (Tk)	Purpose
Open Space (Park/Home)	Free	Outdoor or indoor training
Resistance Bands	150 – 200	Assisted pull-ups, stretching
Yoga Mat	500 – 1000	Comfort for floor exercises
Water Bottle	100 – 150	Hydration during workouts

6 Conclusion

A user who struggles with push-ups and flexibility may be categorized as a beginner and assigned exercises like knee push-ups, assisted pull-ups, and portability drills. On the other hand, an advanced athlete proficient in pull-ups and dips may focus on muscle-up movements. This structured approach prevents injuries by progressively challenging individuals based on their fitness level.

References

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