

Medical Test Calculator - Implementation Plan

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📋 প্রকল্প সংক্ষিপ্তসার

Medinova Medical Services Ltd এর জন্য একটি **comprehensive Test Calculator** তৈরি করা ঘাবে যেখানে users multiple tests select করতে পারবে এবং total cost calculate হবে।

📊 ডেটা পরিসংখ্যান

বিবরণ	সংখ্যা
✍ মোট টেস্ট	243টি
📁 ক্যাটাগরি	34টি
💰 মূল্য সীমা	50 - 10,000 টাকা
📦 প্যাকেজ	7টি Health Checkup

🎯 মূল ফিচারসমূহ

1 টেস্ট সিলেকশন সিস্টেম

✓ Category-wise Organization

- HEMATOLOGY (রক্ত পরীক্ষা)
- BIOCHEMISTRY (জৈব রসায়ন)
- HORMONE (হরমোন)
- CARDIAC (হৃদযোগ)
- IMAGING (ইমেজিং)
- এবং আরও 29টি category

✓ Multi-select Functionality

- একসাথে multiple tests select
- Real-time price update
- Easy remove option

✓ Search & Filter

- Test name দিয়ে instant search
- Category-based filtering
- দ্রুত test খুঁজে পাওয়া

2 ক্যালকুলেটর ফিচার

ফিচার	বিবরণ
🕒 Real-time Calculation	Test select করলেই total update
📊 Category Subtotal	Category wise price breakdown
💰 Grand Total	সব tests এর মোট দাম
🎁 Package Suggestions	Smart package recommendations
💳 Discount System	Bulk test এর জন্য discount

3 ইউজার ইন্টারফেস

💻 Main Components:

- **Test List View** - Searchable, filterable test list
- **Shopping Cart** - Selected tests with prices
- **Category Sidebar** - Quick navigation
- **Price Summary** - Fixed right panel

- **Print/Export** - PDF download option
-

টেকনিক্যাল আর্কিটেকচার

Option 1: Django App Integration (সুপারিশকৃত)

```
tangail-doctors-python/
└── tests/                      # নতুন Django app
    ├── models.py                 # Test,TestCategory models
    ├── views.py                  # Calculator views
    ├── urls.py                   # Routes
    ├── admin.py                  # Admin interface
    └── management/
        └── commands/
            └── import_tests.py
    └── templates/tests/
        ├── calculator.html
        ├── test_list.html
        └── quotation.html
    └── static/tests/
        ├── css/calculator.css
        └── js/calculator.js
```

Database Models

TestCategory Model:

- name (Category name)
- slug (URL-friendly name)
- order (Display order)
- icon (Category icon)

Test Model:

- test_id (Unique ID: 001-243)
- name (Test name in Bengali)
- category (ForeignKey)
- price (Decimal field)
- is_package (Package flag)
- is_active (Active status)

TestQuotation Model:

- quotation_id (Unique quotation ID)
- patient_name (Optional)
- tests (ManyToMany)
- total_amount, discount, final_amount
- created_at (Timestamp)

🎨 ইউজার ইন্টারফেস ডিজাইন

লেআ�ট স্ট্রাকচার

📱 Medinova Test Calculator		
Category	Test List	Calculator
Sidebar	[🔍 Search Box]	Panel
• Blood	<input type="checkbox"/> CBC (300ট)	Selected: 5
• Urine	<input type="checkbox"/> RBS (150ট)	
• Hormone	<input type="checkbox"/> TSH (500ট)	✓ CBC - 300ট
• Cardiac	...	✓ RBS - 150ট
• ...		✓ TSH - 500ট
	[Load More]	...
		Total: 950ট
		[🖨️ Print]
		[🖨️ PDF]

🎨 ডিজাইন ফিচার

🎯 Sticky Panel

Calculator সবসময় visible

📱 Responsive

Mobile-friendly layout

BD Bengali

সম্পূর্ণ বাংলা সাপোর্ট

JavaScript Functionality

Core Functions

Selection Functions:

- selectTest(testId, testName, price)
- removeTest(testId)
- clearAll()

Calculation Functions:

- calculateSubtotal(category)
- calculateGrandTotal()
- applyDiscount(percentage)

Package Detection:

- checkPackageAvailable(selectedTests)
- suggestPackage()

Search & Filter:

- searchTests(query)
- filterByCategory(categoryId)

Export Functions:

- printQuotation()
- downloadPDF()
- shareWhatsApp()

LocalStorage Integration

Selected tests কে localStorage এ save করা যাতে page refresh এ data না হারায়। Browser বন্ধ করলেও data থাকবে।

🔧 ইমপ্লিমেন্টেশন স্টেপস

📅 ৫-দিনের কর্মপরিকল্পনা

Phase 1: Django App Setup (Day 1) ⏳ 6-8 ঘণ্টা

- ✓ Create `tests` app
- ✓ Create models (TestCategory, Test)
- ✓ Management command for JSON import
- ✓ Setup admin interface
- ✓ Run migrations and import 243 tests

Phase 2: Basic Calculator (Day 2) ⏳ 6-8 ঘণ্টা

- ✓ Create calculator view
- ✓ Design HTML template
- ✓ Category sidebar
- ✓ Test listing with checkboxes
- ✓ Calculator panel

Phase 3: Interactive Features (Day 3) ⏳ 8-10 ঘণ্টা

- ✓ JavaScript real-time calculation
- ✓ Search functionality
- ✓ Category filtering
- ✓ LocalStorage persistence
- ✓ Remove/clear functionality

Phase 4: Advanced Features (Day 4) ⏳ 8-10 ঘণ্টা

- ✓ Package detection & suggestions
- ✓ Discount system
- ✓ Print quotation
- ✓ PDF export
- ✓ WhatsApp share

Phase 5: UI Polish & Testing (Day 5) ⏳ 6-8 ঘণ্টা

1. ✓ Responsive design testing
 2. ✓ Bengali optimization
 3. ✓ Loading animations
 4. ✓ Error handling
 5. ✓ Cross-browser testing
-

📱 অতিরিক্ত ফিচার (Optional)

🎯 User Integration

 Authentication	User login integration
 Save Quotations	User account এ save
 History	Previous quotations view
 Favorites	Frequently used tests

🎯 Admin Features

 Price Update	Admin থেকে price change
 Add/Remove Tests	Dynamically manage tests
 Discount Rules	Configure discounts
 Analytics	Quotation statistics

🎯 Appointment Integration

-  **Book Appointment** - Selected tests সহ appointment
-  **Email Quotation** - Email এ quotation পাঠানো
-  **Payment Gateway** - Online payment integration
-  **Home Collection** - Sample collection service

Routes Structure

```
/tests/calculator/ - Main calculator page /tests/api/tests/ - Get all tests (JSON API) /tests/api/search/ - Search tests endpoint /tests/api/calculate/ - Calculate total endpoint /tests/quotation/<id>/ - View quotation /tests/quotation/<id>/pdf/ - Download PDF /tests/quotation/save/ - Save quotation
```

Required Packages

For PDF Generation:

- reportlab==3.6.13
- weasyprint==60.1

For Excel Export:

- openpyxl==3.1.2

Already Available:

- django==4.2.7
- Python 3.13

Color Scheme

Primary Blue

#0066CC

Health Green

#00A859

Emergency Red

#FF6B6B

Quick Start Commands

Create new app

```
$ python manage.py startapp tests
```

Add to INSTALLED_APPS in settings.py

```
$ nano config/settings.py
```

Create models and migrations

```
$ python manage.py makemigrations tests $ python manage.py migrate
```

Import test data from JSON

```
$ python manage.py import_tests
```

Create superuser (if needed)

```
$ python manage.py createsuperuser
```

Run development server

```
$ python manage.py runserver
```

Access calculator

```
$ http://127.0.0.1:8000/tests/calculator/
```

 **Success Criteria** **চেকলিস্ট**

- ✓ All 243 tests imported successfully
- ✓ 34 categories organized properly
- ✓ Real-time calculation working
- ✓ Search responsive (< 100ms)
- ✓ Mobile responsive design complete
- ✓ Print/PDF export functional
- ✓ Bengali text displayed correctly
- ✓ LocalStorage persistence working
- ✓ Package suggestions accurate
- ✓ Admin panel fully operational

Future Enhancements

Phase 2 Features (Future)

-  **AI-powered Suggestions** - Symptoms থেকে test suggest
-  **Lab Report Integration** - Upload & view reports
-  **Prescription Upload** - Automatic test extraction
-  **Insurance Coverage** - Insurance covered tests
-  **Comparison Tool** - Other labs এর সাথে তুলনা
-  **Appointment Scheduling** - Test appointment book
-  **Home Collection** - Sample collection service
-  **Multi-language** - English, Bengali, others
-  **Mobile App** - React Native/Flutter app
-  **Payment Integration** - bKash, Nagad, card

Key Benefits

Users এর জন্য

- দ্রুত test খুঁজে পাওয়া
- সঠিক মূল্য জানা
- Multiple tests একসাথে
- Instant quotation
- Time saving

Medinova এর জন্য

- Professionalism বৃদ্ধি
- Customer convenience
- Digital presence
- Data analytics
- Revenue tracking

Ready to Start Implementation!

এই comprehensive plan follow করে step-by-step implementation শুরু করা যাবে।

আপনি যদি বলেন তাহলে আমি এখনই **Phase 1** দিয়ে শুরু করব!

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