**Project Title: Kasheer Shawls – E-commerce Platform**

**Group Members’ Names & Roll Numbers:**

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**COCOMO Estimation:**

1. **Project Type:** Organic (small team, familiar environment, simple requirements)
2. **Estimated Size:** 8 KLOC (based on typical small e-commerce websites)

**Effort Calculation:**  
Effort = 2.4 × (KLOC)^1.05  
Effort = 2.4 × (8)^1.05 ≈ 2.4 × 8.57 ≈ **20.57 person-months**

**Duration Calculation:**  
Duration = 2.5 × (Effort)^0.38  
Duration = 2.5 × (20.57)^0.38 ≈ 2.5 × 2.87 ≈ **7.18 months**

*(Note: Since our team is part-time and limited to one semester (4 months), we will adjust work distribution to complete the core MVP within time.)*

**Function Point Analysis (FPA):**

1. **Inputs:**
   * Product Add (Admin)
   * User Registration
   * Order Placement
   * Payment Details
   * Review Submission  
     → **5 Inputs (Medium = 4 FP each)** → 5 × 4 = **20 FP**
2. **Outputs:**
   * Order Confirmation
   * Admin Reports (Sales, Customers)  
     → **2 Outputs (Medium = 5 FP each)** → 2 × 5 = **10 FP**
3. **Inquiries:**
   * Search Product
   * Track Order Status  
     → **2 Inquiries (Low = 3 FP each)** → 2 × 3 = **6 FP**
4. **Internal Logical Files (ILF):**
   * Product Catalog
   * Customer Database
   * Order History  
     → **3 ILFs (Medium = 7 FP each)** → 3 × 7 = **21 FP**
5. **External Interface Files (EIF):**
   * Payment Gateway Integration (JazzCash, Stripe APIs)  
     → **1 EIF (Low = 5 FP)** → 5 FP

**Unadjusted Function Points (UFP):**

UFP = 20 + 10 + 6 + 21 + 5 = **62 FP**

**Complexity Adjustment Factor (CAF):**

(Assumed based on moderate complexity: 12)

Final FP = UFP × (0.65 + (0.01 × CAF))  
Final FP = 62 × (0.65 + 0.12) = 62 × 0.77 = **47.74 ≈ 48 FP**

**Summary Table:**

| **Estimation Method** | **Size Estimate** | **Effort** | **Duration** | **Assumptions** |
| --- | --- | --- | --- | --- |
| COCOMO | 8 KLOC | 20.57 person-months | 7.18 months | Organic type project, adjusted for team size and academic schedule |
| Function Point Analysis | 48 FP | Effort per FP (estimated average) → 0.5 person-months per 1 FP ≈ 24 person-months | 7–8 months | Medium complexity; basic e-commerce functions |

**📌 Final Note:**

Even though the COCOMO and FPA estimates suggest ~7 months, the **Kasheer Shawls MVP** focuses only on **core features** within a **3–4 month semester timeline** by:

* + Prioritizing essential features first.
  + Minimizing complex customizations initially.
  + Adjusting workload among 3–4 students.