

```

% Prompt user inputs
weight_of_cloth = input('Enter weight of the cloth (kg): ');
quantity_of_dirt = input('Enter quantity of dirt (low, medium, high): ', 's');
type_of_fabric = input('Enter type of fabric (cotton, synthetic, delicate,
wool): ', 's');

% Call the washing machine function
[water_level, detergent_quantity, wash_time] =
washing_machine(weight_of_cloth, quantity_of_dirt, type_of_fabric);

% Display results in the Command Window
fprintf('Water Level: %d liters\n', water_level);
fprintf('Detergent Quantity: %.2f grams\n', detergent_quantity);
fprintf('Wash Time: %d minutes\n', wash_time);

% Function definition
function [water_level, detergent_quantity, wash_time] =
washing_machine(weight_of_cloth, quantity_of_dirt, type_of_fabric)
    % Determine dirt level
    if strcmp(quantity_of_dirt, 'low')
        dirt_level = 1;
    elseif strcmp(quantity_of_dirt, 'medium')
        dirt_level = 2;
    else
        dirt_level = 3;
    end

    % Determine fabric type
    if strcmp(type_of_fabric, 'cotton')
        fabric_type = 1;
    elseif strcmp(type_of_fabric, 'synthetic')
        fabric_type = 2;
    elseif strcmp(type_of_fabric, 'delicate')
        fabric_type = 3;
    else
        fabric_type = 4;
    end

    % Determine water level based on weight of cloth
    if weight_of_cloth <= 5
        water_level = 1;
    elseif weight_of_cloth <= 10

```

```

    water_level = 2;
else
    water_level = 3;
end

% Adjust water level for high dirt level
if dirt_level == 3
    water_level = min(water_level + 1, 3);
end

% Determine detergent quantity based on weight of cloth
if weight_of_cloth <= 5
    detergent_quantity = 50;
elseif weight_of_cloth <= 10
    detergent_quantity = 100;
else
    detergent_quantity = 150;
end

% Adjust detergent quantity for high dirt level
if dirt_level == 3
    detergent_quantity = min(detergent_quantity + 50, 200);
end

% Determine wash time based on weight of cloth
if weight_of_cloth <= 5
    wash_time = 30;
elseif weight_of_cloth <= 10
    wash_time = 45;
else
    wash_time = 60;
end

% Adjust wash time for high dirt level
if dirt_level == 3
    wash_time = wash_time + 15;
end
% Adjust wash time for fabric type
if fabric_type == 3 % Delicate
    wash_time = wash_time - 10;
    water_level = 1;
    detergent_quantity = 50;

```

```
elseif fabric_type == 4 % Wool
    wash_time = wash_time + 10;
    water_level = 3;
    detergent_quantity = 150;
end
end
```