Code:

```
% Parameters
num_users = 4;          % Number of users
num_bits = 100;         % Number of bits per user
SNR_dB = 10;            % Signal-to-Noise Ratio (in dB)

% Generate random data for each user
user_data = randi([0,1], num_users, num_bits);

% Generate spreading codes for each user
spreading_codes = round(rand(num_users, num_bits))*2 - 1; % BPSK

% Modulate data using spreading codes
spread_data = user_data .* spreading_codes;

% Add noise to the transmitted signal
SNR = 10^(SNR_dB/10);  % Convert SNR from dB to linear scale
noise_power = 1/SNR;   % Noise power
noise = sqrt(noise_power/2) * (randn(num_users, num_bits) + 1i * randn(num_users,
num_bits));
received_signal = spread_data + noise;

% Demodulate received signal using the same spreading codes
demodulated_data = received_signal .* spreading_codes;

% Decode data for each user
decoded_data = sum(demodulated_data, 2) > 0;

% Display results
for i = 1:num_users
   disp(['User ', num2str(i), ' Original Data: ', num2str(user_data(i,:))]);
   disp(['User ', num2str(i), ' Decoded Data:  ', num2str(decoded_data(i,:))]);
end
```

Output:

User 1 Original Data: 1 1 1 1 0 1 1 1 0 1 0 0 1 1 1 1 1 0 1 0 0 1 0 1 1 0 0 1 0
1 0 1 0 0 1 1 0 0 1 0 1 0 1 1 1 1 1 1 0 1 1 0 1 0 0 0 1 0 1 0 0 1 0 1 1 0 0
0 0 1 0 1 1 1 1 0 1 1 1 0 0 0 1 0 0 1 0 0 1 0 0 0 0 0 0 1 0 1 1 1 0
User 1 Decoded Data: 1

User 2 Original Data: 1 0 1 0 1 0 1 0 0 0 0 0 1 0 0 0 1 0 0 0 1 0 1 1 0 1 1 1 1
1 1 1 1 0 1 1 0 0 1 1 0 0 0 0 1 0 0 0 0 1 0 1 1 0 0 1 1 0 1 0 0 1 0 0 0 1 0
1 1 0 1 1 1 0 1 1 0 0 1 1 0 0 1 1 0 1 0 1 1 0 1 0 1 0 0 0 1 0 0 0
User 2 Decoded Data: 1

User 3 Original Data: 0 0 0 1 1 1 1 1 0 1 1 0 0 0 1 1 1 1 1 1 1 1 1 0 1 0 0 0 0 0
0 0 0 0 0 1 0 0 0 0 0 0 1 0 0 1 1 0 1 0 1 1 1 0 1 0 0 0 1 0 0 1 0 1 0 0 1 0
0 1 1 1 1 0 0 1 0 1 1 1 0 1 1 0 0 0 0 1 0 1 1 1 0 1 0 0 1 1 1 1 1 0

User 3 Decoded Data: 1

User 4 Original Data: 1 1 1 0 1 1 0 0 1 0 1 1 1 0 0 1 0 0 0 0 1 1 0 0 0 1 1 0 1
0 1 0 1 0 0 1 0 0 0 0 0 1 0 0 0 0 1 1 0 1 1 1 0 0 0 0 0 0 0 1 0 1 1 1 1 1 1
1 1 0 0 1 0 0 0 0 1 1 0 0 1 0 0 0 0 1 1 1 1 0 1 1 0 0 1 0 0 1 0 0

User 4 Decoded Data: 1