

# Data Mapping for a No-SQL database

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No-SQL databases are not relational

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# No-SQL databases are **not relational**

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- Not in any normal form
- Data not necessarily atomized
- Data can be redundant (*no single source of truth*)
- Very willing to store calculated data as a field
- Collections may bear strong similarities; don't abstract too much
- Key is **query speed**, not small storage size

09:52 AM



# For Sale

Q search

**Item Name** **\$10.00**

*Jane Doe*

4.5 stars (64 reviews)

**Item Name** **\$10.00**

*Jane Doe*

4.5 stars (64 reviews)

**Item Name** **\$10.00**

*Jane Doe*

4.5 stars (64 reviews)

**Item Name** **\$10.00**

*Jane Doe*

4.5 stars (64 reviews)

**Item Name** **\$10.00**

*Jane Doe*

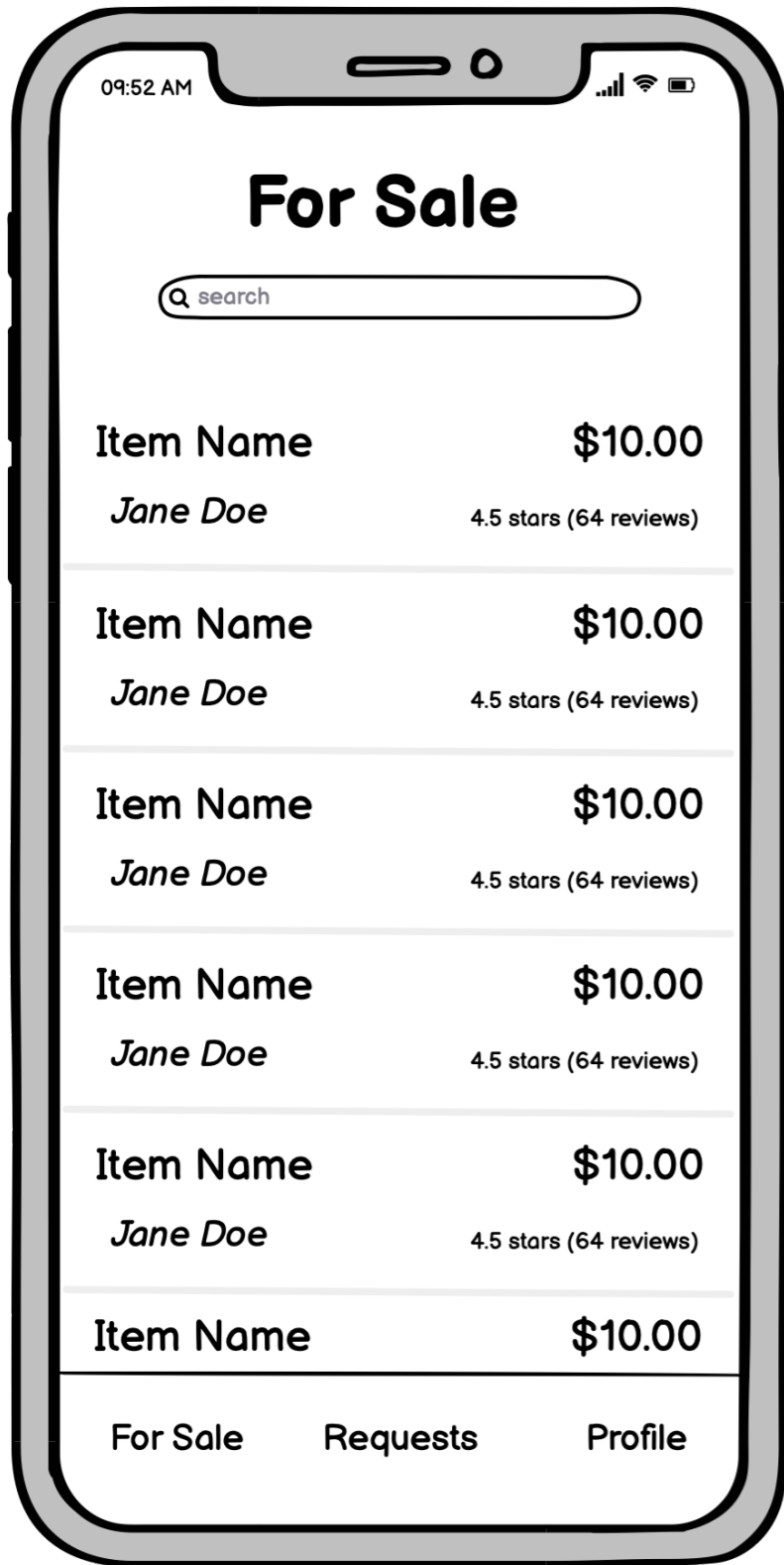
4.5 stars (64 reviews)

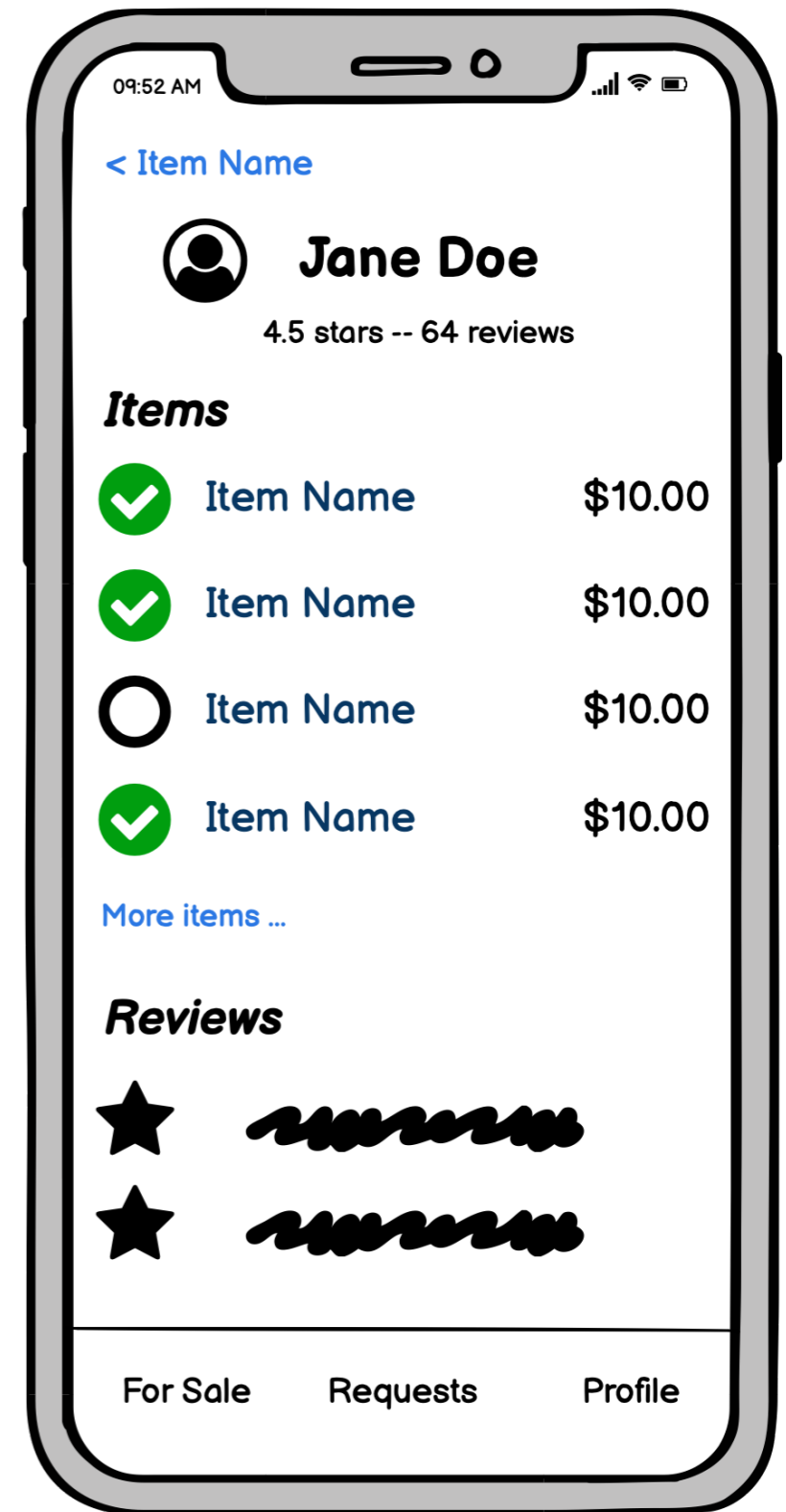
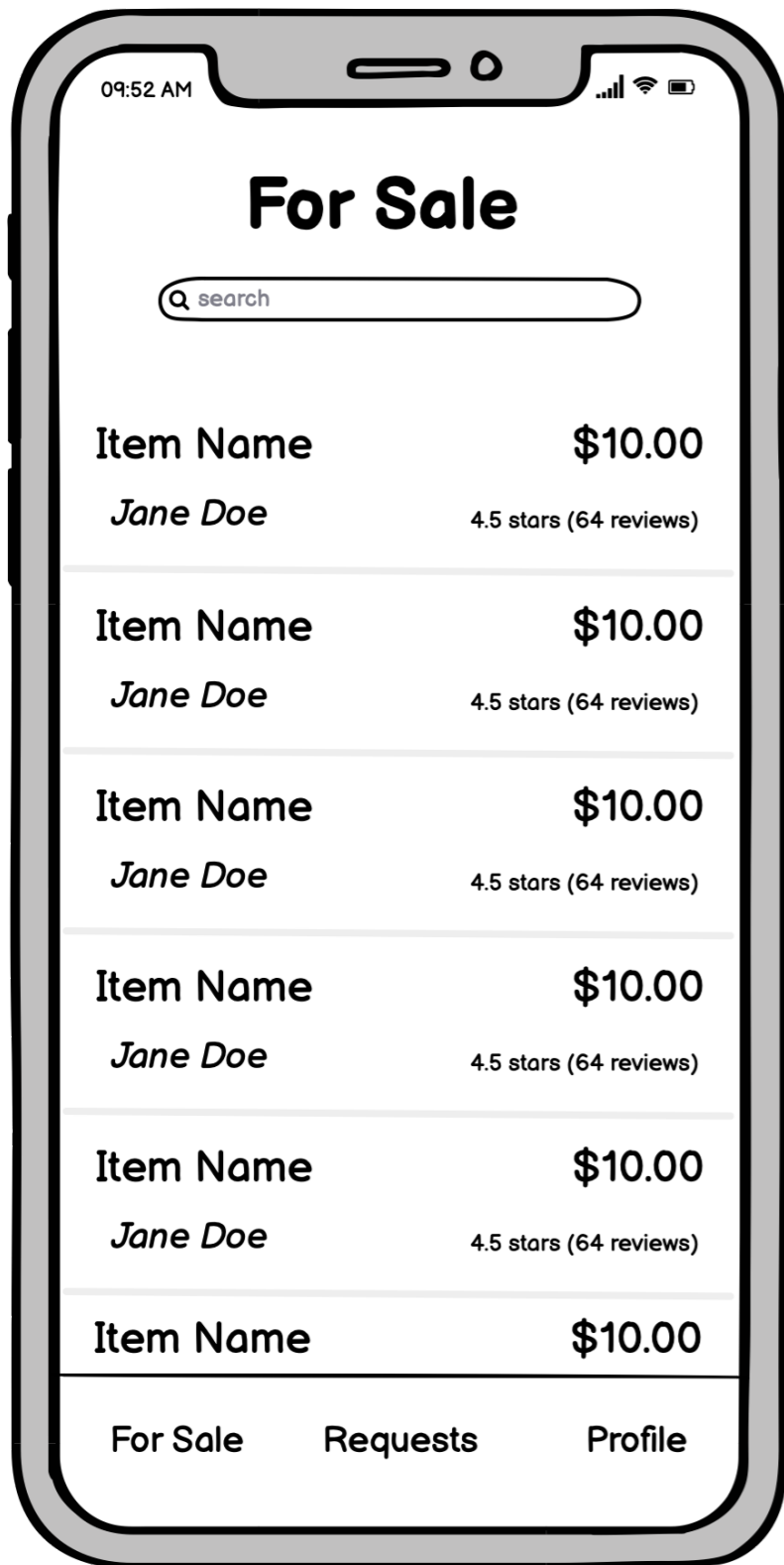
**Item Name** **\$10.00**

For Sale

Requests

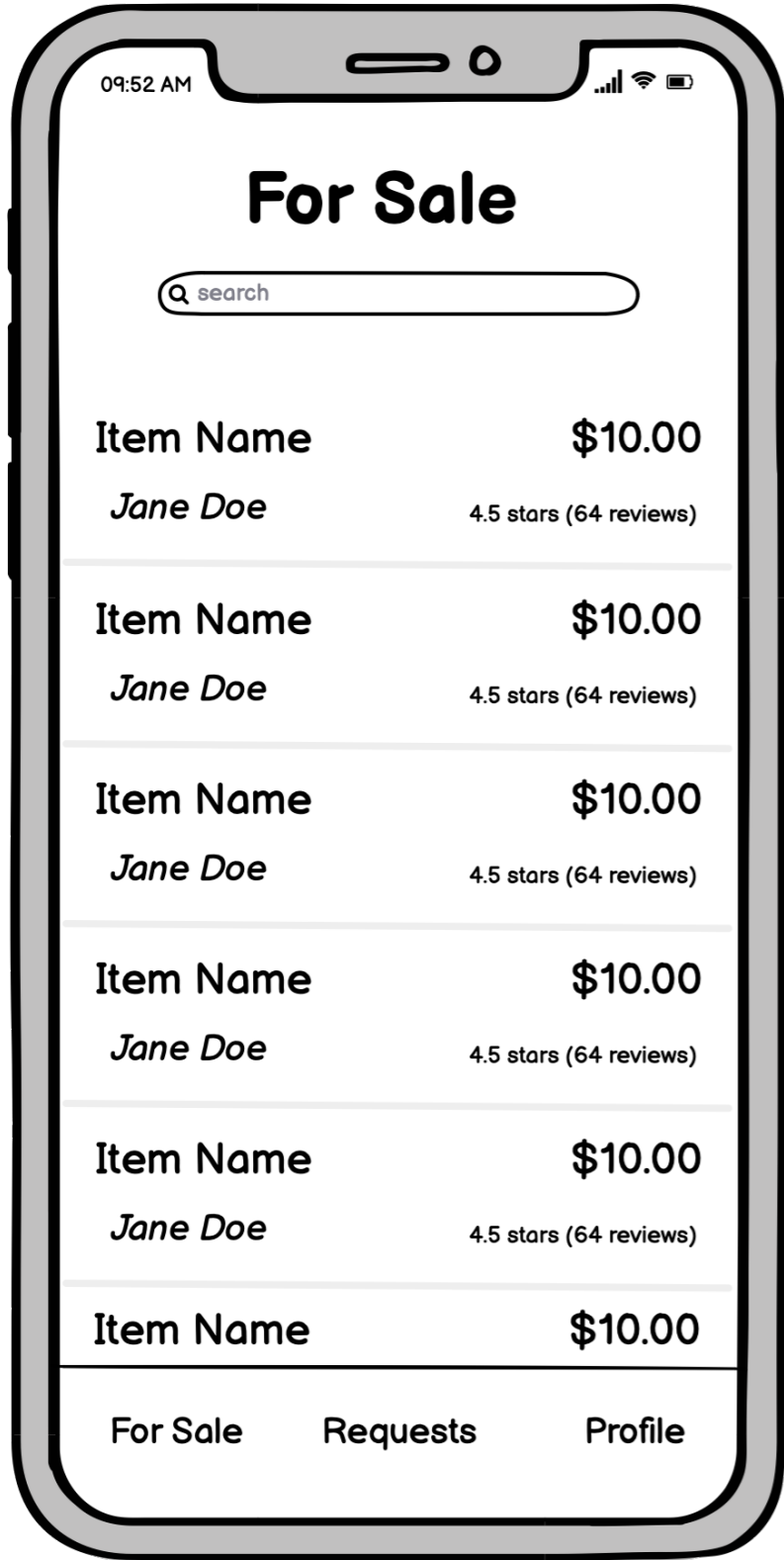
Profile







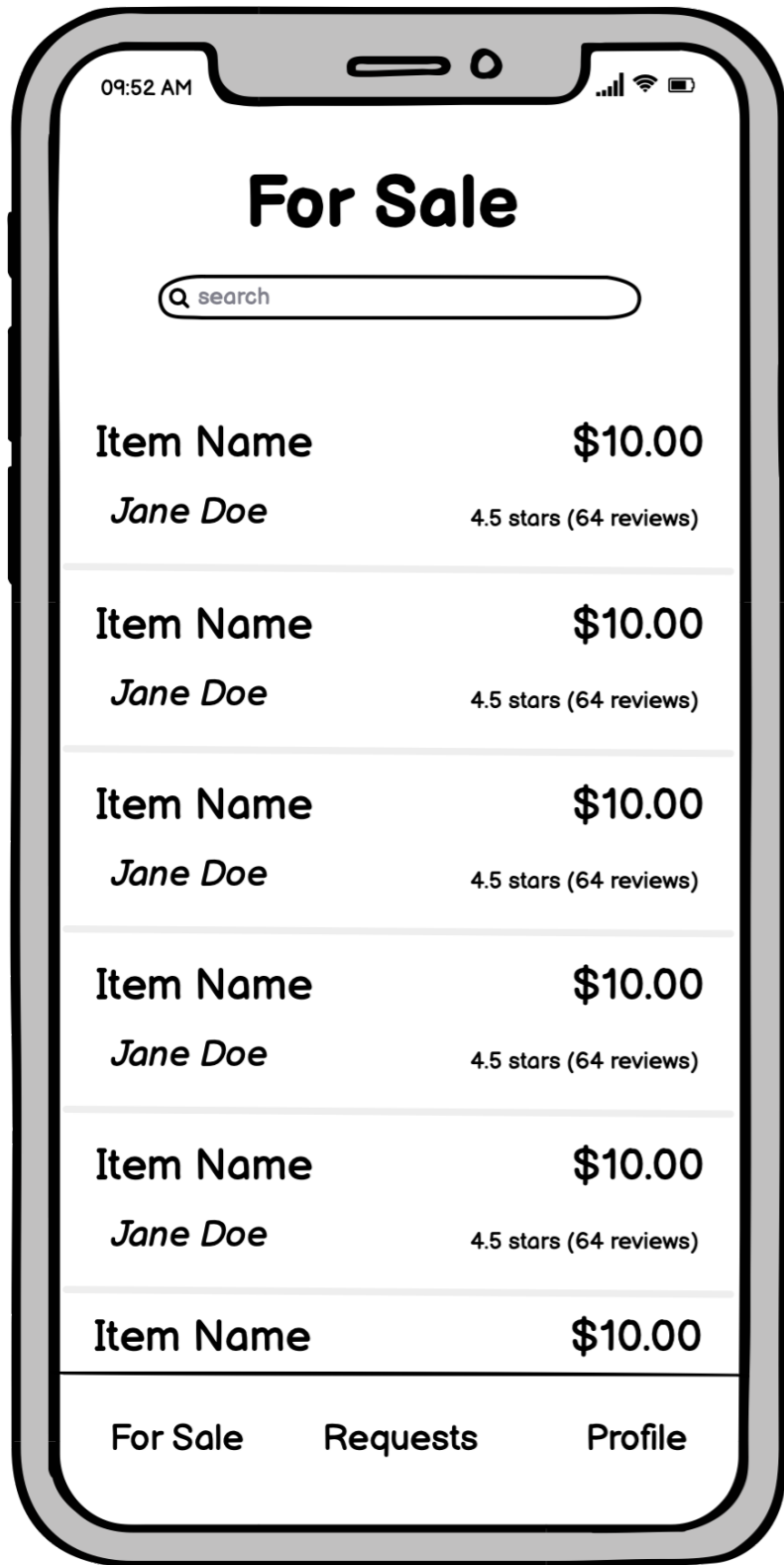
# Items Collection



```
Items: [  
  { itemID: UUID,  
    name: First Item,  
    price: 10.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image1,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Jane Doe,  
      avg_rating: 4.5,  
      num_rating: 65  
      gravatar_path: s3.amazon.gravator1  
    }  
  },  
  { itemID: UUID,  
    name: Second Item,  
    price: 79.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image2,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Bruce Wayne,  
      avg_rating: 5.0,  
      num_rating: 42  
      gravatar_path: s3.amazon.gravator2  
    }  
  },  
  ...  
]
```

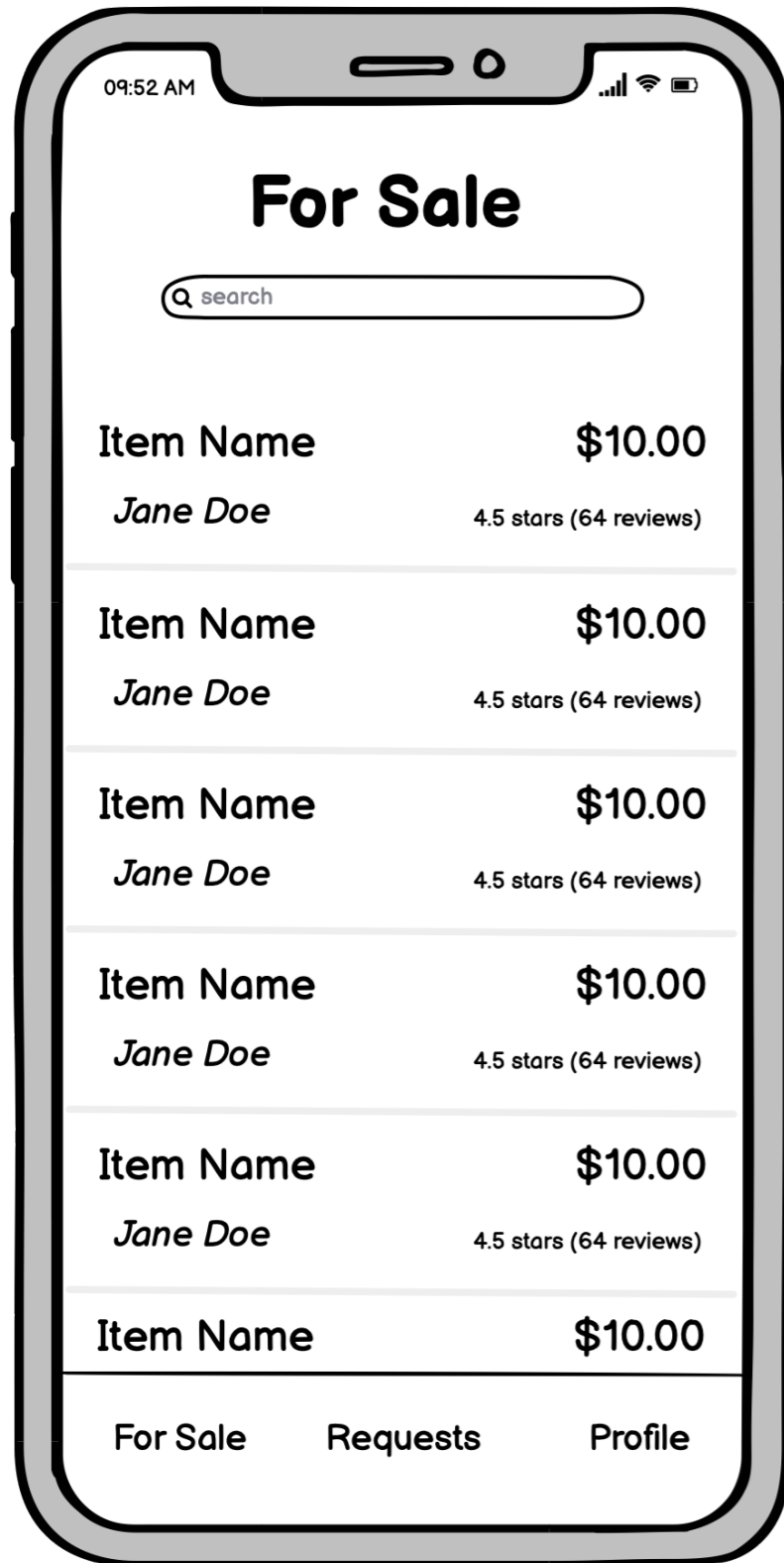


# Items struct



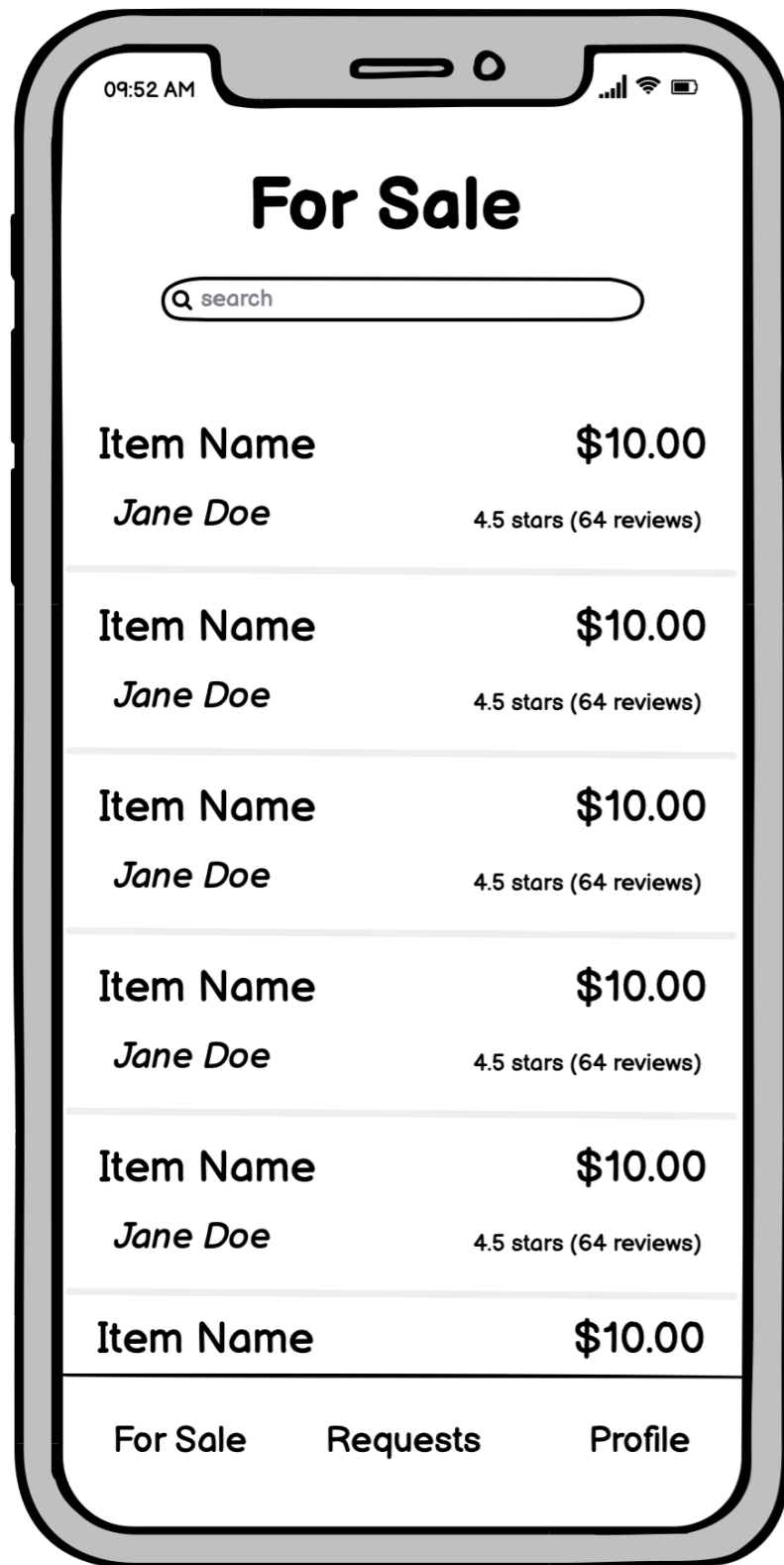
```
Items: [  
  {  
    itemID: UUID,  
    name: First Item,  
    price: 10.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image1,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Jane Doe,  
      avg_rating: 4.5,  
      num_rating: 65  
      gravatar_path: s3.amazon.gravator1  
    }  
  },  
  {  
    itemID: UUID,  
    name: Second Item,  
    price: 79.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image2,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Bruce Wayne,  
      avg_rating: 5.0,  
      num_rating: 42  
      gravatar_path: s3.amazon.gravator2  
    }  
  },  
  ...  
]
```

# ItemList struct



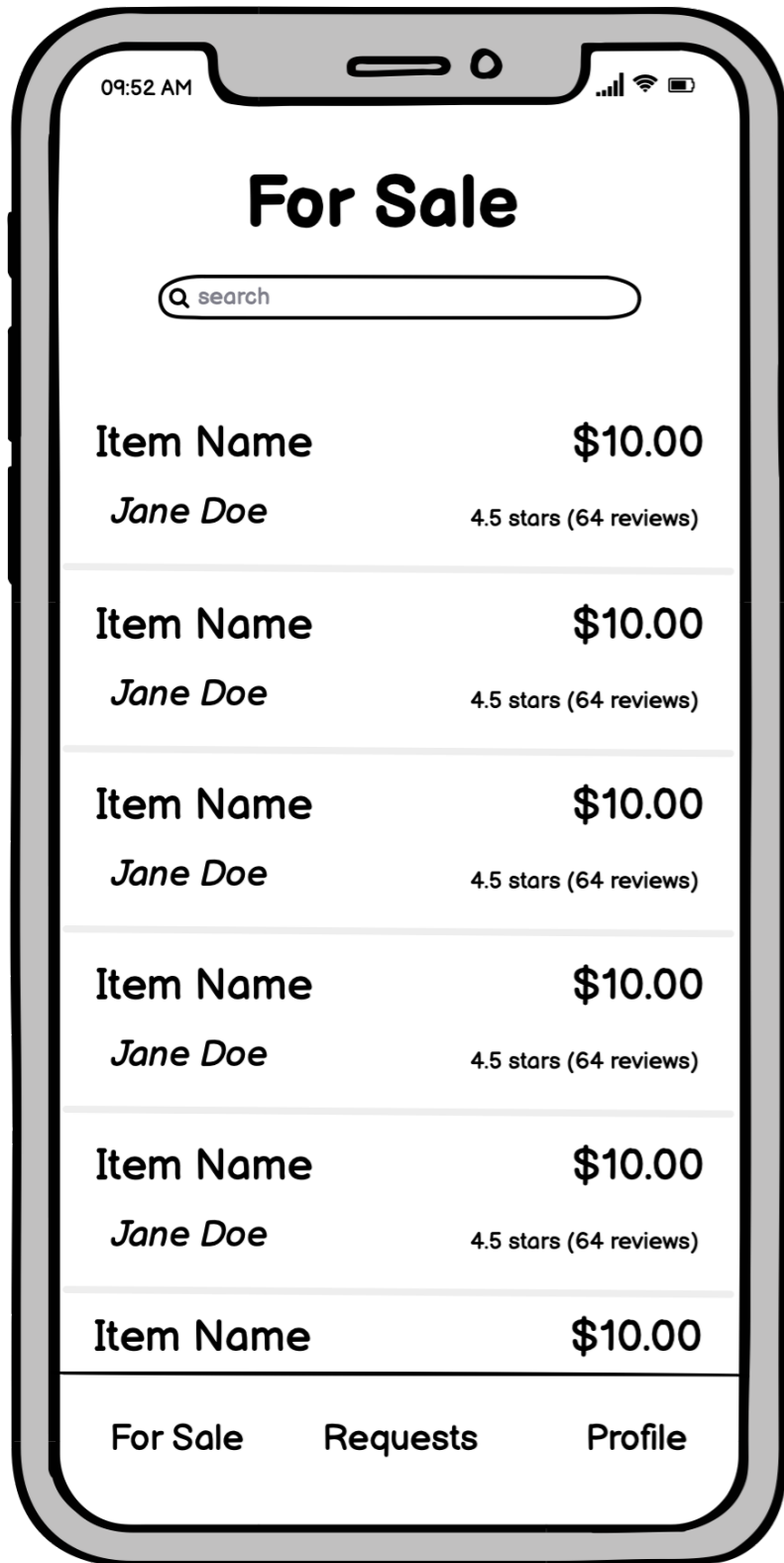
```
Items: [  
  {  
    itemID: UUID,  
    name: First Item,  
    price: 10.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image1,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Jane Doe,  
      avg_rating: 4.5,  
      num_rating: 65  
      gravatar_path: s3.amazon.gravator1  
    }  
  },  
  {  
    itemID: UUID,  
    name: Second Item,  
    price: 79.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image2,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Bruce Wayne,  
      avg_rating: 5.0,  
      num_rating: 42  
      gravatar_path: s3.amazon.gravator2  
    }  
  },  
  ...  
]
```

# ItemOwner struct



```
Items: [  
  {  
    itemID: UUID,  
    name: First Item,  
    price: 10.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image1,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Jane Doe,  
      avg_rating: 4.5,  
      num_rating: 65  
      gravatar_path: s3.amazon.gravator1  
    }  
  },  
  {  
    itemID: UUID,  
    name: Second Item,  
    price: 79.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image2,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Bruce Wayne,  
      avg_rating: 5.0,  
      num_rating: 42  
      gravatar_path: s3.amazon.gravator2  
    }  
  },  
  ...  
]
```

# Items struct & substructs



```
Items: [  
  {  
    itemID: UUID,  
    name: First Item,  
    price: 10.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image1,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Jane Doe,  
      avg_rating: 4.5,  
      num_rating: 65  
      gravatar_path: s3.amazon.gravator1  
    }  
  },  
  {  
    itemID: UUID,  
    name: Second Item,  
    price: 79.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image2,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Bruce Wayne,  
      avg_rating: 5.0,  
      num_rating: 42  
      gravatar_path: s3.amazon.gravator2  
    }  
  },  
  ...  
]
```

# Items Collection

```
Items: [  
  { itemID: UUID,  
    name: First Item,  
    price: 10.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image1,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Jane Doe,  
      avg_rating: 4.5,  
      num_rating: 65  
      gravatar_path: s3.amazon.gravator1  
    }  
  },  
  { itemID: UUID,  
    name: Second Item,  
    price: 79.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image2,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Bruce Wayne,  
      avg_rating: 5.0,  
      num_rating: 42  
      gravatar_path: s3.amazon.gravator2  
    }  
  },  
  ...  
]
```



```

Items: [
  { itemID: UUID,
    name: First Item,
    price: 10.00,
    description: A lot of text here...,
    image_path: s3.amazon.image1,
    date_posted: 2022-11-02,
    date_sold: nil,
    owner: {
      ownerID: UUID,
      name: Jane Doe,
      avg_rating: 4.5,
      num_rating: 65
      gravatar_path: s3.amazon.gravator1
    }
  },
  { itemID: UUID,
    name: Second Item,
    price: 79.00,
    description: A lot of text here...,
    image_path: s3.amazon.image2,
    date_posted: 2022-11-02,
    date_sold: nil,
    owner: {
      ownerID: UUID,
      name: Bruce Wayne,
      avg_rating: 5.0,
      num_rating: 42
      gravatar_path: s3.amazon.gravator2
    }
  },
  ...
]

```

## ItemDetail struct



# ItemDetailOwner struct

```
Items: [  
  {  
    itemID: UUID,  
    name: First Item,  
    price: 10.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image1,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Jane Doe,  
      avg_rating: 4.5,  
      num_rating: 65  
      gravatar_path: s3.amazon.gravator1  
    }  
  },  
  {  
    itemID: UUID,  
    name: Second Item,  
    price: 79.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image2,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Bruce Wayne,  
      avg_rating: 5.0,  
      num_rating: 42  
      gravatar_path: s3.amazon.gravator2  
    }  
  },  
  ...  
]
```

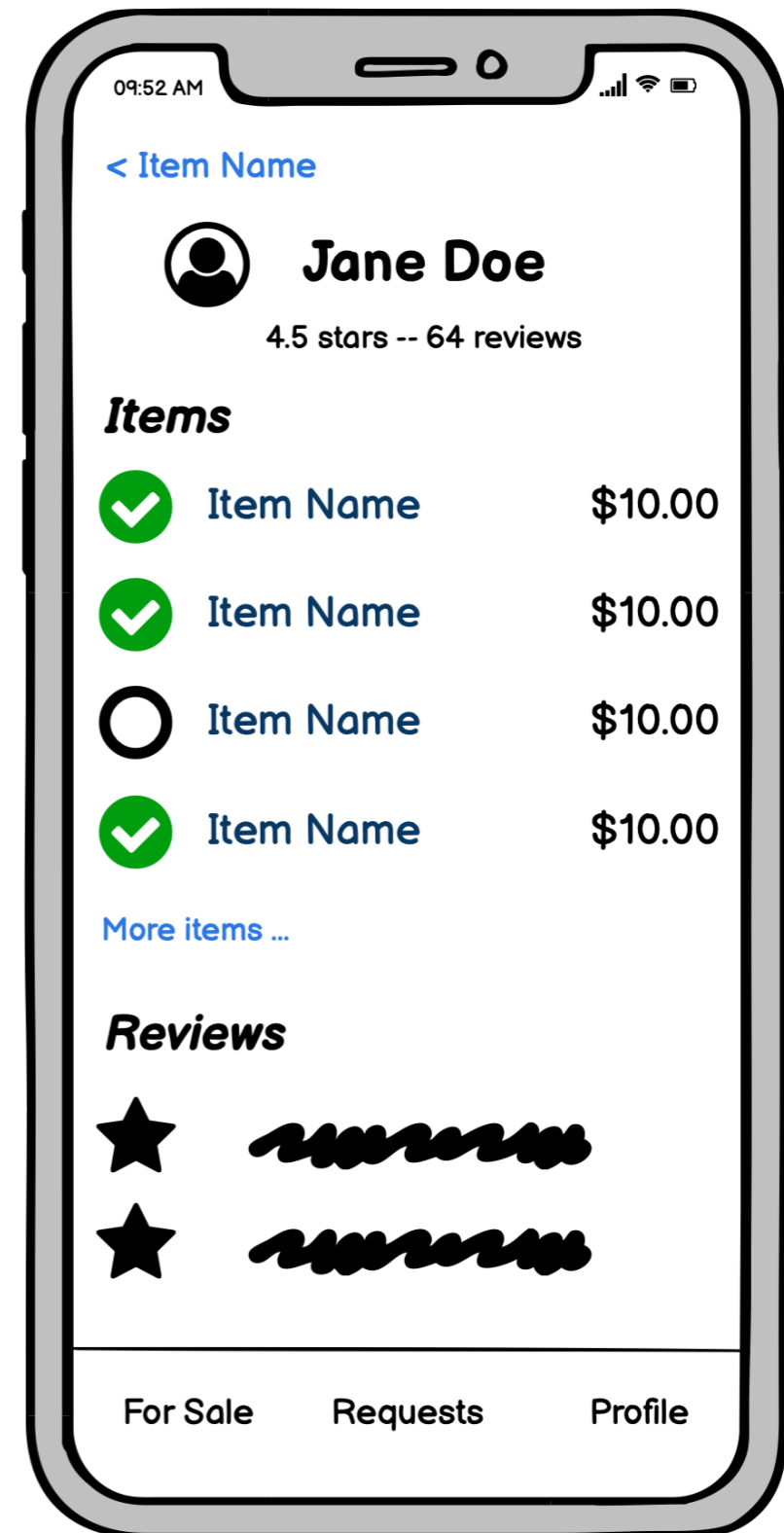


```

Owners: [
  { ownerID: UUID,
    name: Bruce Wayne,
    avg_rating: 5.0,
    num_rating: 42
    gravatar_path: s3.amazon.gravator2,
    items: [
      {itemID: UUID,
        name: First BW item,
        price: 79.00,
        sold: false
      },
      {itemID: UUID,
        name: Second BW item,
        price: 19.95,
        sold: true
      }
    ],
    reviews: [
      {reviewID: UUID,
        text: My first review...,
        by: Someone,
        stars: 5
      },
      {reviewID: UUID,
        text: My second review...,
        by: Someone,
        stars: 5
      }
    ]
  },
  { ownerID: UUID,
    name: Jane Doe,
    avg_rating: 4.5,
    num_rating: 64
    gravatar_path: s3.amazon.gravator1,
    items: [
      {itemID: UUID,
        name: First JD item,
        price: 10.00
      }
    ]
  }
]

```

# Owners Collection



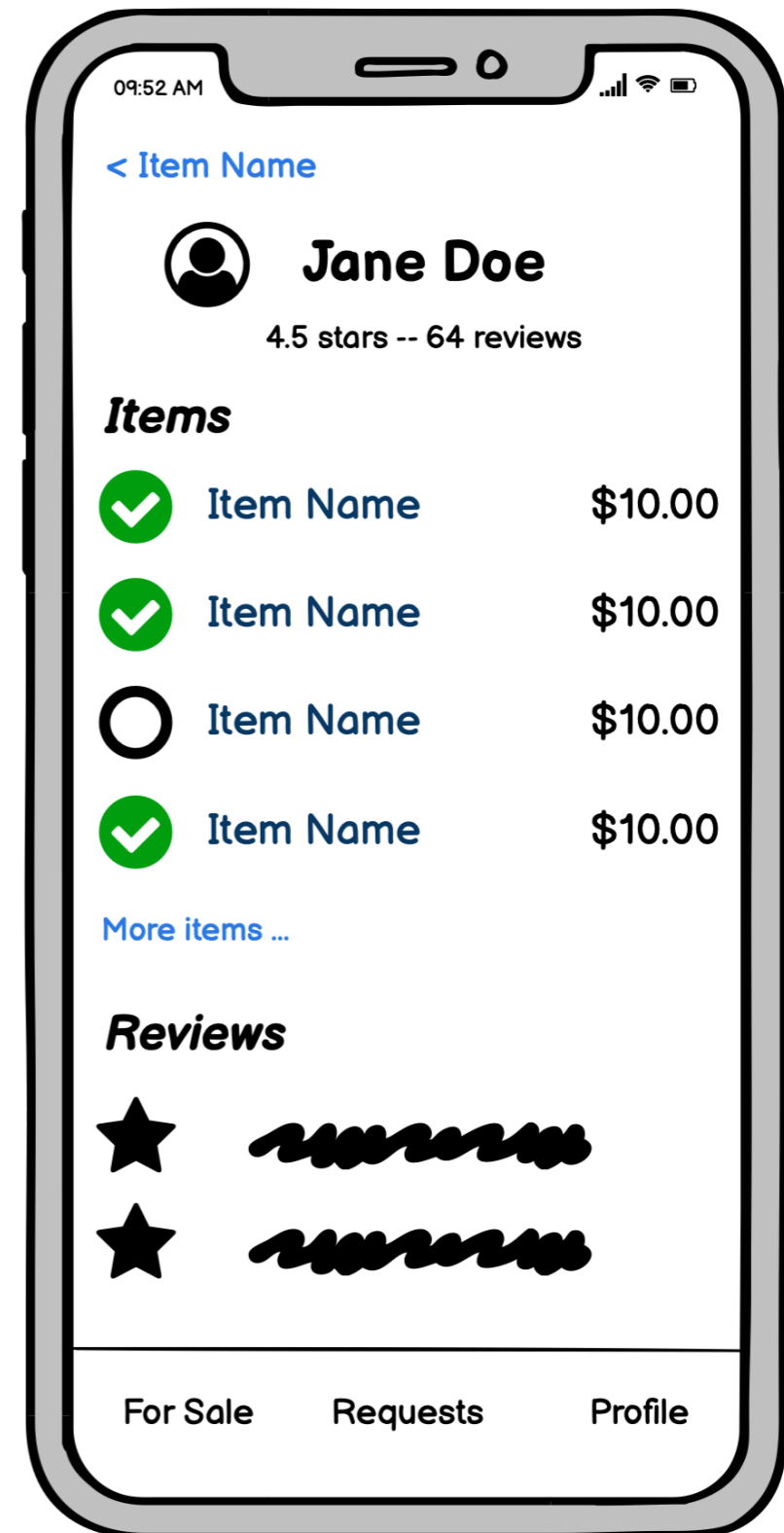


```

Owners: [
  { ownerID: UUID,
    name: Bruce Wayne,
    avg_rating: 5.0,
    num_rating: 42
    gravatar_path: s3.amazon.gravator2,
    items: [
      {itemID: UUID,
        name: First BW item,
        price: 79.00,
        sold: false
      },
      {itemID: UUID,
        name: Second BW item,
        price: 19.95,
        sold: true
      }
    ],
    reviews: [
      {reviewID: UUID,
        text: My first review...,
        by: Someone,
        stars: 5
      },
      {reviewID: UUID,
        text: My second review...,
        by: Someone,
        stars: 5
      }
    ]
  },
  { ownerID: UUID,
    name: Jane Doe,
    avg_rating: 4.5,
    num_rating: 64
    gravatar_path: s3.amazon.gravator1,
    items: [
      {itemID: UUID,
        name: First JD item,
        price: 10.00
      }
    ]
  }
]

```

## Owner struct

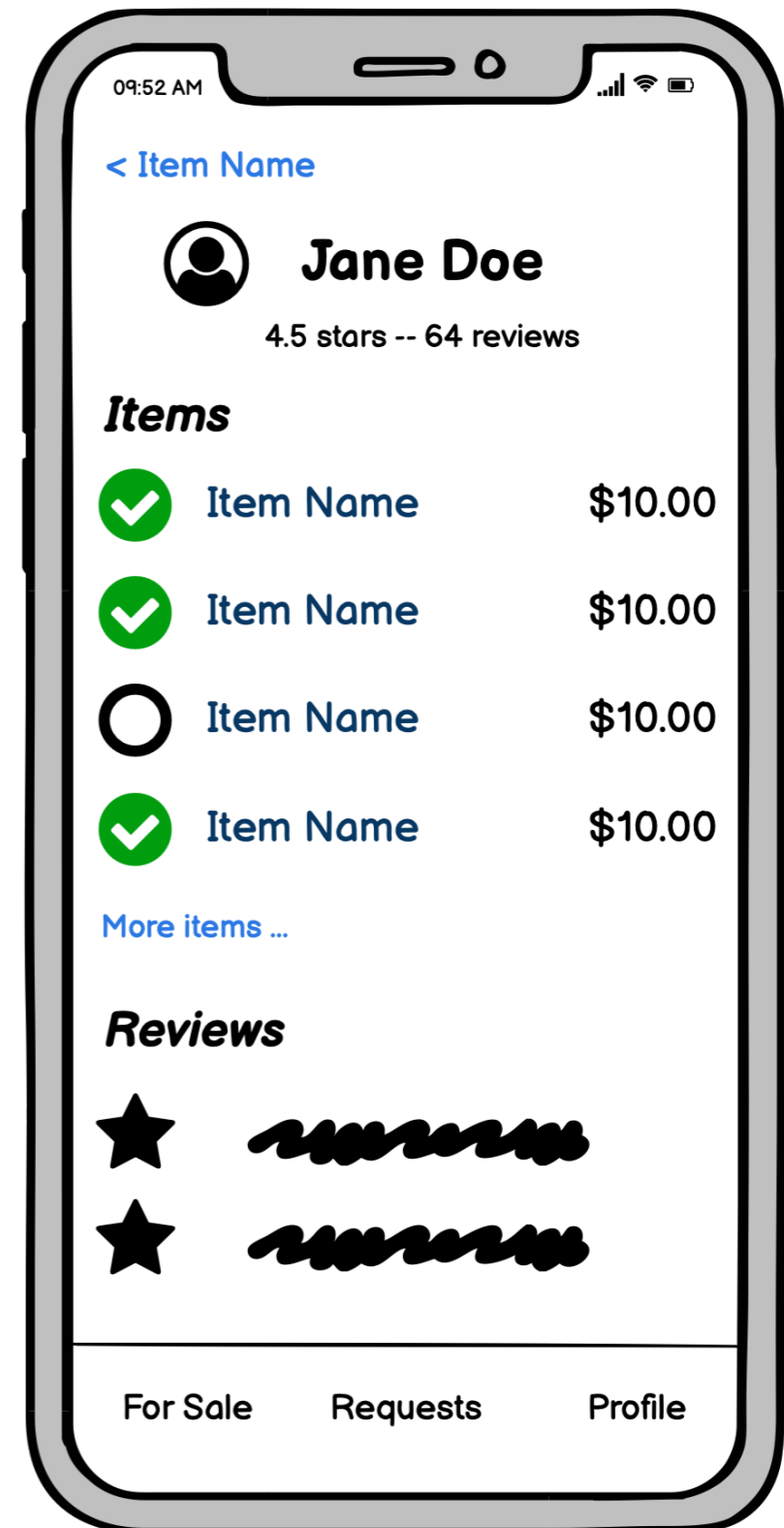


```

Owners: [
  { ownerID: UUID,
    name: Bruce Wayne,
    avg_rating: 5.0,
    num_rating: 42
    gravatar_path: s3.amazon.gravator2,
    items: [
      {itemID: UUID,
        name: First BW item,
        price: 79.00,
        sold: false
      },
      {itemID: UUID,
        name: Second BW item,
        price: 19.95,
        sold: true
      }
    ],
    reviews: [
      {reviewID: UUID,
        text: My first review...,
        by: Someone,
        stars: 5
      },
      {reviewID: UUID,
        text: My second review...,
        by: Someone,
        stars: 5
      }
    ]
  },
  { ownerID: UUID,
    name: Jane Doe,
    avg_rating: 4.5,
    num_rating: 64
    gravatar_path: s3.amazon.gravator1,
    items: [
      {itemID: UUID,
        name: First JD item,
        price: 10.00
      }
    ]
  }
]

```

## OwnerItem struct

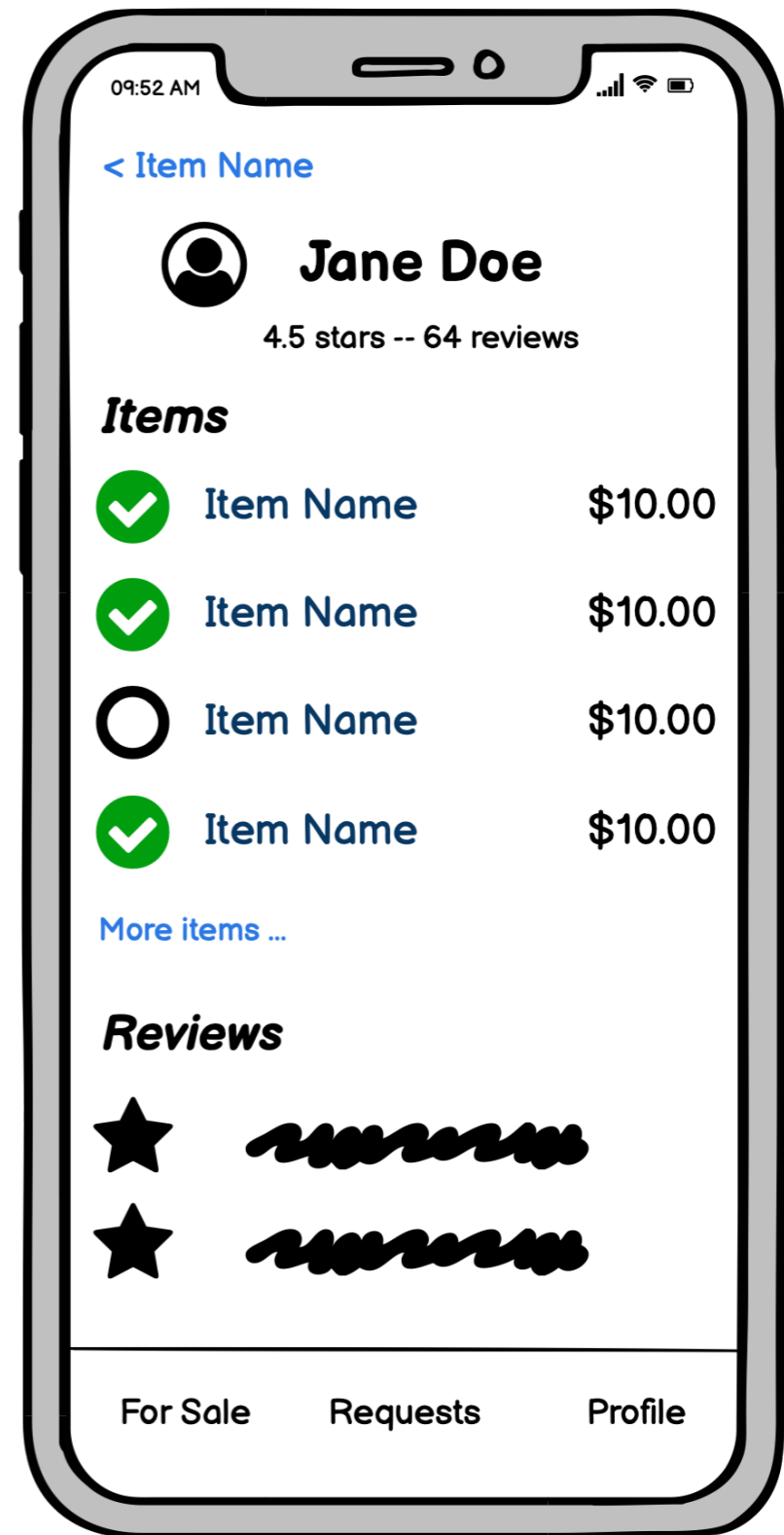


```

Owners: [
  { ownerID: UUID,
    name: Bruce Wayne,
    avg_rating: 5.0,
    num_rating: 42
    gravatar_path: s3.amazon.gravator2,
    items: [
      {itemID: UUID,
        name: First BW item,
        price: 79.00,
        sold: false
      },
      {itemID: UUID,
        name: Second BW item,
        price: 19.95,
        sold: true
      }
    ],
    reviews: [
      {reviewID: UUID,
        text: My first review...,
        by: Someone,
        stars: 5
      },
      {reviewID: UUID,
        text: My second review...,
        by: Someone,
        stars: 5
      }
    ]
  },
  { ownerID: UUID,
    name: Jane Doe,
    avg_rating: 4.5,
    num_rating: 64
    gravatar_path: s3.amazon.gravator1,
    items: [
      {itemID: UUID,
        name: First JD item,
        price: 10.00
      }
    ]
  }
]

```

## OwnerReview struct



# Items, ItemList, ItemOwner, ItemDetail, ItemOwnerDetail

# Owner, OwnerItem, OwnerReview

```
Items: [  
  { itemID: UUID,  
    name: First Item,  
    price: 10.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image1,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Jane Doe,  
      avg_rating: 4.5,  
      num_rating: 65  
      gravatar_path: s3.amazon.gravator1  
    }  
  },  
  { itemID: UUID,  
    name: Second Item,  
    price: 79.00,  
    description: A lot of text here...,  
    image_path: s3.amazon.image2,  
    date_posted: 2022-11-02,  
    date_sold: nil,  
    owner: {  
      ownerID: UUID,  
      name: Bruce Wayne,  
      avg_rating: 5.0,  
      num_rating: 42  
      gravatar_path: s3.amazon.gravator2  
    }  
  },  
  ...  
]
```

```
Owners: [  
  { ownerID: UUID,  
    name: Bruce Wayne,  
    avg_rating: 5.0,  
    num_rating: 42  
    gravatar_path: s3.amazon.gravator2,  
    items: [  
      {itemID: UUID,  
        name: First BW item,  
        price: 79.00,  
        sold: false  
      },  
      {itemID: UUID,  
        name: Second BW item,  
        price: 19.95,  
        sold: true  
      }  
    ],  
    reviews: [  
      {reviewID: UUID,  
        text: My first review...,  
        by: Someone,  
        stars: 5  
      },  
      {reviewID: UUID,  
        text: My second review...,  
        by: Someone,  
        stars: 5  
      }  
    ]  
  },  
  { ownerID: UUID,  
    name: Jane Doe,  
    avg_rating: 4.5,  
    num_rating: 64
```

