

## BankAccount ISP

| Method        | Params | Returns | Values          | Exception  | Ch ID | Characteristic                                     | Partition |
|---------------|--------|---------|-----------------|------------|-------|--|-----------|
| setName       | String |         |                 |            | C1    | Name set   | T, F      |
| setBalance    | String |         |                 |            | C2    | Balance set  | T, F      |
| setMinBalance | String |         |                 |            | C3    | MinBalance set                                     | T, F      |
| getAccNumber  |        | String  | String,<br>null |            | C4    | Returns five-character String                      | T, F      |
| getName       |        | String  | String,<br>null |            | C5    | Returns not-null                                   | T, F      |
| getBalance    |        | double  | double          |            | C6    | Returns double                                     | T, F      |
| getMinBalance |        | double  | double          |            | C7    | Returns value<br>>=0                               | T, F      |
| deposit       | double | double  | double          |            | C8    | Amount > bank<br>account's<br>balance              | T, F      |
| withdraw      | double | double  | double          |            | C9    | Amount >= 0  | T, F      |
|               |        |         |                 | MaxBalance | C10   | Balance before<br>withdraw is >=<br>after withdraw | T, F      |
| toString      |        | String  | String,<br>null |            | C11   | toString printed                                   | T, F      |

| ID | Characteristic                | setName | setBalance | setMinBalance | getAccNum | getName |
|----|-------------------------------|---------|------------|---------------|-----------|---------|
| C1 | Name set                      | X       |            |               |           | X       |
| C2 | Balance set                   |         | X          |               |           |         |
| C3 | MinBalance set                |         |            | X             |           |         |
| C4 | Returns five-character String |         |            |               | X         |         |
| C5 | Returns not-null              |         |            |               | X         | X       |

|     |  |  |  |  |  |  |
|-----|--|--|--|--|--|--|
| C6  | Returns double                                   |  |  |  |  |  |
| C7  | Returns value $\geq 0$                           |  |  |  |  |  |
| C8  | Amount > bank account's balance                  |  |  |  |  |  |
| C9  | Amount $\geq 0$                                  |  |  |  |  |  |
| C10 | Balance before withdraw is $\geq$ after withdraw |  |  |  |  |  |
| C11 | toString printed                                 |  |  |  |  |  |

| ID  | Characteristic                                   | getBalance | getMinBalance | deposit | withdraw | toString |
|-----|--|------------|---------------|---------|----------|----------|
| C1  | Name set   |            |               |         |          |          |
| C2  | Balance set                                      | X          |               |         |          |          |
| C3  | MinBalance set                                   |            | X             |         |          |          |
| C4  | Returns five-character String                    |            |               |         |          |          |
| C5  | Returns not-null                                 |            |               |         |          |          |
| C6  | Returns double                                   | X          | X             | X       | X        |          |
| C7  | Returns value $\geq 0$                           | X          | X             | X       | X        |          |
| C8  | Amount > bank account's balance                  |            |               | X       | X        |          |
| C9  | Amount > 0                                       |            |               | X       | X        |          |
| C10 | Balance before withdraw is $\geq$ after withdraw |            |               |         | X        |          |
| C11 | toString printed                                 |            |               |         |          | X        |

| Method        | Characteristics | Test Requirements | Infeasible TRs | Revised TRs | Number TRs |
|---------------|-----------------|-------------------|----------------|-------------|------------|
| setName       | C1              | T, F              |                |             | 2          |
| setBalance    | C2              | T, F              |                |             | 2          |
| setMinBalance | C3              | T, F              |                |             | 2          |

|               |                     |                                  |                    |   |   |
|---------------|---------------------|----------------------------------|--------------------|---|---|
| getAccNum     | C4, C5              | TT, TF, FT                       | TF, FT             | TF -> FF                                      | 2 |
| getName       | C1, C5              | TT, TF, FT                       | TF, FT             | TF -> FF                                      | 2 |
| getBalance    | C2, C6, C7          | TTT, TTF, TFT, FTT               | TFT                |   | 3 |
| getMinBalance | C3, C6, C7          | TTT, TTF, TFT, FTT               | TFT                |   | 3 |
| deposit       | C6, C7, C8, C9      | TTTT, TTTF, TTFT, TFTT, FTTT     | FTTT               | FTTT -> TTFF                                  | 5 |
| withdraw      | C6, C7, C8, C9, C10 | TTFTT, TTFTF, TTFFT, TFFT, FTFTT | TTFTF, TFFT, FTFTT | TTFTF -> TTFFF, TFFT -> FFTTF, FTFTT -> FFTFF | 5 |
| toString      | C11                 | T, F                             |                    |   | 2 |