Problem Set 1 Exercise #02: Family Heights

Reference: Week 2 Lecture notes

Learning objective: Program structure; Data type; Input/output statements

Estimated completion time: 10 minutes

Problem statement:

According to genetic study, the child's future height is strongly related to the parents' heights together with the child's gender. The correlation can be expressed by using the following mathematic formulas:

- If the child is a boy, his future height = (father's height + mother's height) * 0.54;
- If the child is a girl, her future height = (father's height * 0.923 + mother's height) * 0.5

Assuming John (father) and Mary (mother) have two kids: Tom (boy) and Kate (girl). Write a program **heights.c** to accept the height inputs for John and Mary, print out a family height table including the predicted heights for Tom and Kate, corrected to 2 decimal places.

Sample run #1:

```
Enter the heights for John and Mary: 1.8 1.6
Height for Tom: 1.84
Height for Kate: 1.63
```

Sample run #2:

```
Enter the heights for John and Mary: 1.78 1.64
Height for Tom: 1.85
Height for Kate: 1.64
```