

CS4S22 Neural Networks and Expert Systems

Tutorial 3 answer sheet Part (2)

```
group selection yes, no .
group distance near, far .
group openings open, closed .
```

```
/* determine facts needed */
```

```
rule ask_hungry
    if hungry is unknown
    then ask hungry .
```

```
question hungry
    Are you hungry? ;
    choose from selection
    because you will not want chips if you are not
hungry .
```

```
rule ask_money
    if money is unknown
    then ask money .
```

```
question money
    Do you have enough money to buy chips? ;
    choose from selection
    because you will not be able to buy chips if you
have no money .
```

```
rule ask_near_shop
    if position is unknown
    then ask position .
```

```
question position
    How far is the nearest chip shop? ;
    choose from distance
    because the shop may be too far away to buy chips
.
```

```
rule shop_open
    if open_shop is unknown
    then ask open_shop .
```

```
question open_shop
    Is the shop open? ;
    choose from openings
    because if the shop is closed you will not be
buying any chips .
```

```
/* rules about buying chips */
```

```
rule buy_chips
    if hungry is yes
    and money is yes
    and position is near
    and open_shop is open
    then write('You can buy chips')
    and nl .
```

```
rule do_not_buy_chips
    if hungry is no
    or money is no
    or position is far
    or open_shop is closed
    then write('You can not buy chips')
    and nl .
```

```
/* start the program */
```

```
ruleset find_out
    contains all rules ;
    select rule using first come first served ;
    update ruleset by removing each selected rule ;
    initiate by doing restart .
```

```
action buy_or_not
    do invoke ruleset find_out .
```