Computer Science – Lecture 13
Pascal Programming V

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Blackboard IFP

Objectives

- To talk about conditional statements

- Tomorrow's practical:
  - More Pascal Programming!

Conditional Statement

- Executes code on the basis of some test
- IF condition THEN statement
- Conditions are expressions that can be either TRUE or FALSE
  - Boolean expressions
  - E.g. BankBalance < 0
- Pascal provides the following relational operators:

=	Equal to	>	Greater than
<	Less than	>=	Greater than or equal to
<=	Less than or equal to	<>	Not equal to

- And we can combine then with AND, OR and NOT

Example Conditional

```
if (BankBalance < 0) then
  write ('overdrawn')
 else
  write ('in credit');
```

- Pay particular attention to the position of the semi-colons
  - If – then – else is one complete statement
- The brackets on the expression are not mandatory
  - But can help readability

More statements

- To add more statements, group then in begin and end

```
if (BankBalance < 0) then
 begin
    NoMoreWithdrawals := true;
    write ('overdrawn')
 end
else
 write ('in credit');
```

Nested IF statements

- **We can put an IF statement inside another IF statement**

```
if (num < 0) then
  writeln ( 'Number is less than zero' )
else if (num = 0) then
  writeln ( 'Number is zero' )
else
  writeln ( 'Number is greater than zero'
);
```

Summary

- **Conditional Statements allow code to be executed depending on the result of a test**

- **Remember:**
  - **The position of the semi-colons is important**
  - **Brackets are preferred around the expression for readability**
  - **Use begin and end to group statements**
    - **(or for readability)**
  - **IF statements can be nested to any depth**

Tomorrow's Practical

- Try to write some of the programs suggested on the worksheet
- Worksheets available today if required
- Karl will be available to help between 13:45 and 15:00 in the IT Degree Lab