Use of Statements

- ## Statements Exist Inside functions.

- ## The Most Widely Used Sequential Statements Are:

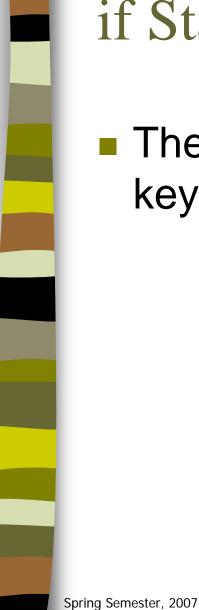 if   switch   do

  while   for

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if Statements

- The IF statement starts with the keyword *if*.

```
if (x < 10){
    a = b;
}
```

if Statements

- There is also an optional clause

    – else clause

```
if (day == Sunday){
  weekend = TRUE;
}
else{
  if (day == Saturday){
    weekend = TRUE;
  }
  else{
    weekday = TRUE;
  }
}
```

switch Statement

- The switch statement is used whenever a single expression value can be used to select between a number of actions.

- A switch statement consists of the keyword **switch** followed by an operator expression.

switch Statement

- The expression will either return a value that matches one of the *choices* in a statement part or match a *default* clause.

switch Statement Example

```
NIBBLE bit_vec, value;
……
switch (bit_vec){
  case 0:
    value = 0;
    break;
  case 1:
    value = 1;
    break;
  case 2:
    value = 2;
    break;
  case 3:
    value = 3;
    break;
  default:
    value = 15;
}
```

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Loop Statements

- The loop statements are used whenever an operation needs to be repeated.

- Loop statements are implemented in three ways

    - *do-while* condition loop statement
    - *while* condition loop statement
    - *for* condition loop statement

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Loop Statements (*do-while*)

- The ***do-while*** condition loop statement will loop as many times as the condition expression is TRUE.

```
do{
    day = get_next_day (day);
}while (flag);
```

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Loop Statements (*while*)

- The ***while*** condition loop statement will loop as long as the condition expression is TRUE.

```
while (day == weekday){
   day =  get_next_day (day);
}
```

Loop Statements (*for loop*)

```
for (i = 0; i <= 10; i = i + 1){
    i_squared[i] = i*i;
}
```

- This loop will execute 10 times whenever execution begins and its function is to calculate squares from 1 to 10 and insert them into the i_squared array.