Problem Solving With C - UE24CS151B

Control Structures

Prof. Sindhu R Pai
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Department of Computer Science and Engineering

PROBLEM SOLVING WITH C

Control Structures

1. Selection structures
2. Looping structures
3. Nested Control Structures
4. Practice Programs

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Selection Structures

- If

```
if (e1)
    <block>|<stmt>
```

- If – else

```
if (e1)
    <block>|<stmt>
else
    <block>|<stmt>
```

- If – else if – else if – else

```
if (e1)
    <block>|<stmt>
else if (e2)
    <block>|<stmt>
else
    <block>|<stmt>
```

- Switch

```
switch (expression)
{
        case integral constant: <stmt> break;
        case integral constant: <stmt> break;
        default: <stmt>
}
```

- Coding Examples

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Looping Structures

- for

```
for(e1; e2; e3)
        <block>|<stmt>
```

- while

```
while(e2)
        <block>|<stmt>
```

- do while

```
do {    <block>
}while(e2);
```

e1,e2,e3 are expressions where e1: initialization, e2: condition, e3: modification

- Infinite loop
- Coding Examples

Nested Control structures

- One loop may be inside another
- One if may be inside another: inner if is reached only if the Boolean condition of the outer if is true
- Combination of above two
- Coding Examples

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Practice Programs

- WAP to count the number of digits in a given integer.
- WAP to count the number of digits which are divisible by 2 in a given integer.
- WAP to input a floating point number from the user and print the count of digits which are divisible by 3 after the decimal point.
- Input 10 characters from the user and check the count of vowels and print same.

THANK YOU

Department of Computer Science and Engineering

Dr. Shylaja S S, Director, CCBD & CDSAML, PESU
Prof. Sindhu R Pai - sindhurpai@pes.edu

Ack: Teaching Assistant - U Shivakumar