**•Trithlon: Swim, Run, and Bike.**

**• Aquathlon: Swim and run (i.e. no bike component)**

**• Duathlon: Run bike run (i.e. no swim but two runs)**

CODE:

#include<iostream>

#include<string>

using namespace std;

void INPUT\_AQU( int\*swim\_time, int\* run\_time, string\* unit);

void CALCULATION\_AQU( int\*swim\_time, int\* run\_time,int\*race\_time, int \*total\_time);

void PRINT\_AQU( int\* race\_time,int\*total\_time ,string\* unit);

void INPUT\_DUA( int\*run1\_time, int\* bike\_time, int\* run\_time, string\* unit);

void CALCULATION\_DUA( int\*run1\_time, int\* bike\_time, int\* run\_time,int\*race\_time, int \*total\_time);

void PRINT\_DUA( int\* race\_time,int\*total\_time ,string\* unit);

void INPUT\_TRI( int\*swim\_time, int\* bike\_time, int\* run\_time, string\* unit);

void CALCULATION\_TRI( int\*swim\_time, int\* bike\_time, int\* run\_time,int\*race\_time, int \*total\_time);

void PRINT\_TRI( int\* race\_time,int\*total\_time ,string\* unit);

int main()

{

string suggest;

string unit[3]={"hours","minutes","seconds"};

int race\_time[4];

int total\_time[3];

int swim\_time[3],bike\_time[3],run\_time[3],run1\_time[3];

cout<<" Enter the type of race which you want to start: "<<endl;

cout<<" The types are: \n ";

cout<<"\*\*\*\*\*\* 1- Triathlon , 2- Duathlon , 3- Aquathlon \*\*\*\*\*\*\n ";

cin>>suggest;

if(suggest=="Trithlon"){

INPUT\_TRI(swim\_time, bike\_time, run\_time, unit);

cout<<endl;

CALCULATION\_TRI(swim\_time, bike\_time, run\_time,race\_time,total\_time);

PRINT\_TRI( race\_time, total\_time , unit);

}

else if(suggest=="Aquathlon"){

INPUT\_AQU( swim\_time, run\_time, unit);

cout<<endl;

CALCULATION\_AQU(swim\_time, run\_time,race\_time,total\_time);

PRINT\_AQU( race\_time,total\_time , unit);

}

else if(suggest=="Duathlon"){

INPUT\_DUA(run1\_time,bike\_time,run\_time,unit);

cout<<endl;

CALCULATION\_DUA(run1\_time, bike\_time, run\_time,race\_time,total\_time);

PRINT\_DUA(race\_time, total\_time, unit);

}

return 0;

}

//TRIATHLON

// first function for INPUT

void INPUT\_TRI( int\*swim\_time, int\* bike\_time, int\* run\_time, string\* unit )

{

for(int i=0; i<3; i++){

cout<<" Enter the data for swim in "<<unit[i]<<" : ";

cin>>swim\_time[i];}

for(int i=0 ; i<3; i++){

cout<<" Enter the data for bike in "<<unit[i]<<" : ";

cin>>bike\_time[i];}

for(int i=0; i<3; i++){

cout<<" Enter the data for run in "<<unit[i]<<" : ";

cin>>run\_time[i];}

}

// 2nd function for calculation at the basis of

// information which has been provided to convert

// it in seconds ...

void CALCULATION\_TRI(int\* swim\_time,int\* bike\_time,int\* run\_time,int\* race\_time,int\* total\_time)

{

for(int i=0; i<4; i++){

// calculation for swiming

if(i==0){

race\_time[i]=swim\_time[i]\*3600+swim\_time[1]\*60+swim\_time[2];}

// calculation for bike

else if(i==1){

race\_time[i]=bike\_time[0]\*3600+bike\_time[i]\*60+bike\_time[2];

}

// calculation for run

else if(i==2){

race\_time[i]=run\_time[0]\*3600+run\_time[1]\*60+run\_time[i];

}

// sumarize the calculation

else if(i==3){

race\_time[i]=race\_time[0]+race\_time[1]+race\_time[2];

}

}

// for setting up the calculation and converting it in total

// time in hours minutes and seconds format....

total\_time[0]=race\_time[0]/3600+race\_time[1]/3600+race\_time[2]/3600;

total\_time[1]=((race\_time[0]%3600)/60+(race\_time[1]%3600)/60+(race\_time[2]%3600)/60)%60;

total\_time[2]=((race\_time[0]%3600)%60+(race\_time[1]%3600)%60+(race\_time[2]%3600)%60)%60;

}

// THIRD function for print

void PRINT\_TRI( int\* race\_time,int\* total\_time ,string\* unit)

{

cout<<"\n Swim time: "<<race\_time[0]/3600<<unit[0]<<" "

<<(race\_time[0]%3600)/60<<unit[1]<<" "<<(race\_time[0]%3600)%60<<unit[2]<<endl;

cout<<" bike time: "<<race\_time[1]/3600<<unit[0]<<" "

<<(race\_time[1]%3600)/60<<unit[1]<<" "<<(race\_time[1]%3600)%60<<unit[2]<<endl;

cout<<" run time: "<<race\_time[2]/3600<<unit[0]<<" "

<<(race\_time[2]%3600)/60<<unit[1]<<" "<<(race\_time[2]%3600)%60<<unit[2]<<endl;

cout<<" Total Time : ";

for(int i=0; i<3; i++){

cout<<total\_time[i]<<unit[i]<<" ";

}

}

//AQUATHLON

//SWIM AND RUN

//Input

void INPUT\_AQU( int\*swim\_time, int\* run\_time, string\* unit){

for(int i=0; i<3; i++){

cout<<" Enter the data for swim in "<<unit[i]<<" : ";

cin>>swim\_time[i];}

for(int i=0; i<3; i++){

cout<<" Enter the data for run in "<<unit[i]<<" : ";

cin>>run\_time[i];}

}

//Calcuation

void CALCULATION\_AQU( int\*swim\_time, int\* run\_time,int\*race\_time, int \*total\_time){

for(int i=0; i<4; i++){

// calculation for swiming

if(i==0){

race\_time[i]=swim\_time[i]\*3600+swim\_time[1]\*60+swim\_time[2];

}

// calculation for run

else if(i==2){

race\_time[i]=run\_time[0]\*3600+run\_time[1]\*60+run\_time[i];

}

// sumarize the calculation

else if(i==3){

race\_time[i]=race\_time[0]+race\_time[2];

}

}

// for setting up the calculation and converting it in total

// time in hours minutes and seconds format....

total\_time[0]=race\_time[3]/3600;

total\_time[1]=((race\_time[0]%3600)/60+(race\_time[2]%3600)/60)%60;

total\_time[2]=race\_time[3]%60;

}

//Print

void PRINT\_AQU( int\* race\_time,int\*total\_time ,string\* unit){

cout<<"\n Swim time: "<<race\_time[0]/3600<<unit[0]<<" "

<<(race\_time[0]%3600)/60<<unit[1]<<" "<<(race\_time[0]%3600)%60<<unit[2]<<endl;

cout<<" run time: "<<race\_time[2]/3600<<unit[0]<<" "

<<(race\_time[2]%3600)/60<<unit[1]<<" "<<(race\_time[2]%3600)%60<<unit[2]<<endl;

cout<<" Total Time : ";

for(int i=0; i<3; i++){

cout<<total\_time[i]<<unit[i]<<" ";

}

}

// DUATHLON

//RUN BIKE RUN

//Input

void INPUT\_DUA(int\* run1\_time , int\* bike\_time, int\* run\_time, string\* unit)

{

for(int i=0; i<3; i++){

cout<<" Enter the data for first run in "<<unit[i]<<" : ";

cin>>run1\_time[i];}

for(int i=0 ; i<3; i++){

cout<<" Enter the data for bike in "<<unit[i]<<" : ";

cin>>bike\_time[i];}

for(int i=0; i<3; i++){

cout<<" Enter the data for 2nd run in "<<unit[i]<<" : ";

cin>>run\_time[i];}

}

//Calculation

void CALCULATION\_DUA( int\*run1\_time, int\* bike\_time, int\* run\_time,int\*race\_time, int \*total\_time){

for(int i=0; i<4; i++){

// calculation for swiming

if(i==0){

race\_time[i]=run1\_time[i]\*3600+run1\_time[1]\*60+run1\_time[2];}

// calculation for bike

else if(i==1){

race\_time[i]=bike\_time[0]\*3600+bike\_time[i]\*60+bike\_time[2];

}

// calculation for run

else if(i==2){

race\_time[i]=run\_time[0]\*3600+run\_time[1]\*60+run\_time[i];

}

// sumarize the calculation

else if(i==3){

race\_time[i]=race\_time[0]+race\_time[1]+race\_time[2];

}

}

// for setting up the calculation and converting it in total

// time in hours minutes and seconds format....

total\_time[0]=race\_time[3]/3600;

total\_time[1]=((race\_time[0]%3600)/60+(race\_time[1]%3600)/60+(race\_time[2]%3600)/60)%60;

total\_time[2]=race\_time[3]%60;

}

//Print

void PRINT\_DUA( int\* race\_time,int\*total\_time ,string\* unit){

cout<<"\n 1st run time: "<<race\_time[0]/3600<<unit[0]<<" "

<<(race\_time[0]%3600)/60<<unit[1]<<" "<<(race\_time[0]%3600)%60<<unit[2]<<endl;

cout<<" bike time: "<<race\_time[1]/3600<<unit[0]<<" "

<<(race\_time[1]%3600)/60<<unit[1]<<" "<<(race\_time[1]%3600)%60<<unit[2]<<endl;

cout<<" 2nd run time: "<<race\_time[2]/3600<<unit[0]<<" "

<<(race\_time[2]%3600)/60<<unit[1]<<" "<<(race\_time[2]%3600)%60<<unit[2]<<endl;

cout<<" Total Time : ";

for(int i=0; i<3; i++){

cout<<total\_time[i]<<unit[i]<<" ";

}

}

// THE END OUTPUTS

// TRITHLON



//DUATHLON



//AQUATHLON

